SONY

DIGITAL 4:2:2 INPUT KIT

BKM-2085-14
BKM-2085-20

OPERATION

For customers in the U.S.A.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

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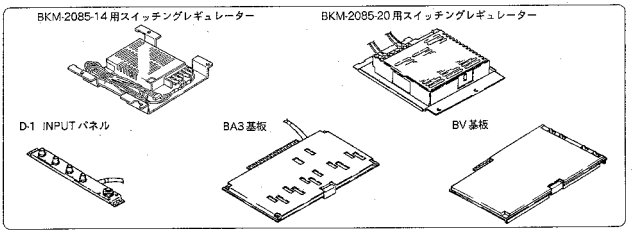
構成品

スイッチングレギュレーターだけが、BKM-2085-14 と BKM-2085-20 とで異なります。



1-2. 取り付け

本キットの取り付けは、以下の手順で行ってください。

1 キャビネットの取り外し
2 スイッチングレギュレーターの取り付け

} BKM-2085-14 と BKM-2085-20 とで異なります。

3 D-1 INPUTパネルの取り付け
4 BA3基板の取り付け
5 BV基板の取り付け
6 モニター右側面のスロットから取り外した基板の取り付け
7 ステップ1で取り外したキャビネットの取り付け
8 ラベルの貼り付け
9 メニュー操作による設定

} BKM-2085-14 と BKM-2085-20 とで共通です。

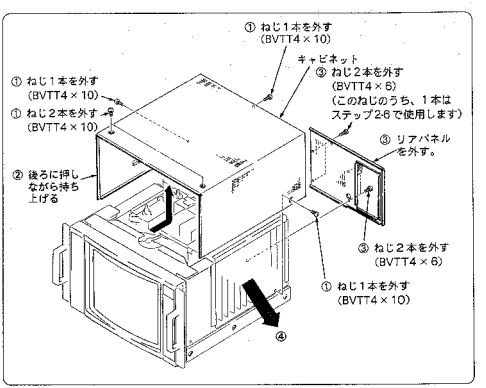
1 キャビネットの取り外し（BVM-1410／1415／1411／1416の場合）

1-1 側面2本と背面1本のねじを外す。

1-2 キャビネットを後ろに押しながら持ち上げて外す。

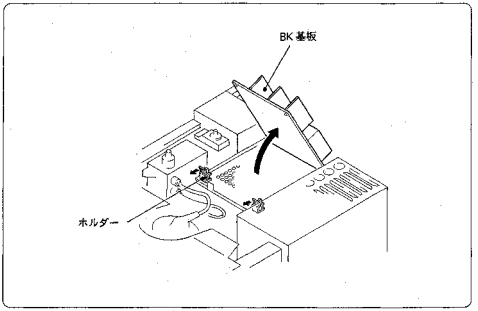
1-3 背面の4本のねじを外して、リアパネルを外す。

1-4 モニター右側面のBAからBJスロットに入っている基板をすべて取り外す。

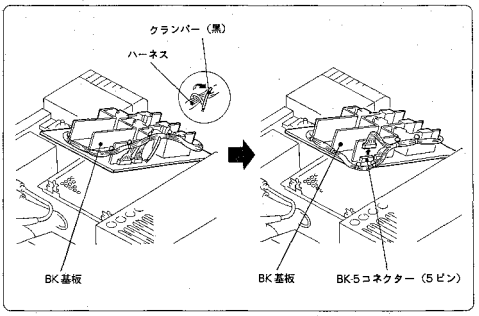


2 スイッチングレギュレーターの取り付け（BVM-1410／1415／1411／1416の場合）

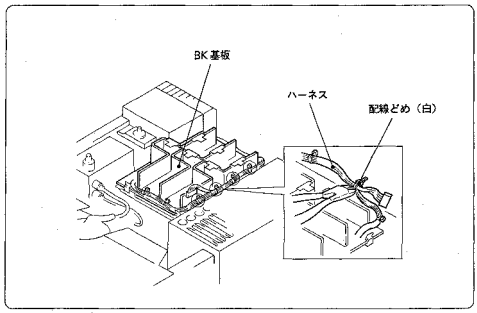
2-1 BK基板のPCB（Printed Circuit Board）ホルダー（2箇所）を外して、BK基板を持ち上げる。



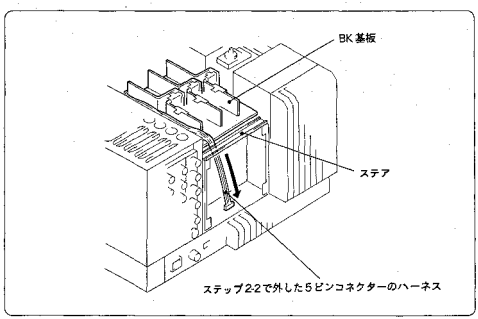
2-2 ハーネスのクランパー（BVM-1410／1411の場合：2箇所、BVM-1415／1416の場合：3箇所）とBK-5コネクター（5ピン）を外し、BK基板を下に降ろす。



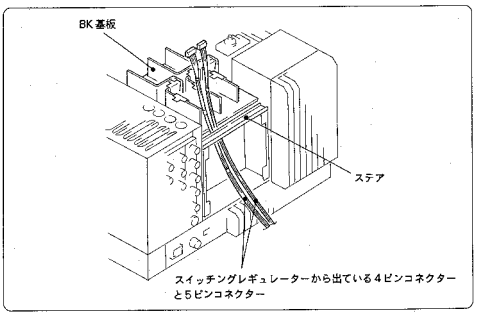
2-3 ハーネスの配線どめ（4箇所）をニッパなどで切り取る。
ハーネスを傷つけないように切り取ってください。
ステップ2-9で再度同じ場所をクランプしますので、クランプされている場所を覚えておいてください。



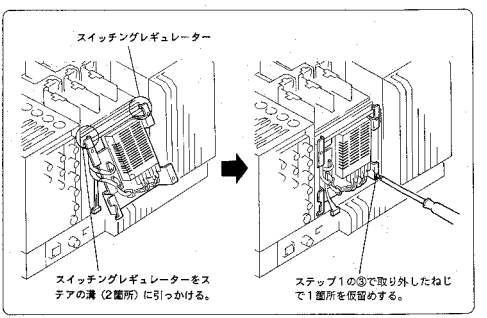
2-4 ステップ2-2で外した5ピンコネクターのハーネスをハーネス群から取り出して、ステアの内側を上から下に通す。



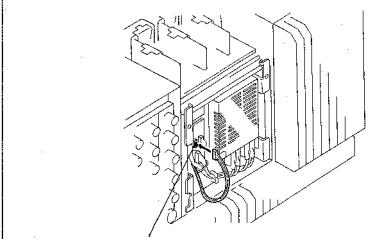
2-5 スイッチングレギュレーター（構成品、BKM-2085-14用）から出ている4ピンコネクターと5ピンコネクターをステアの内側を下から上に通す。



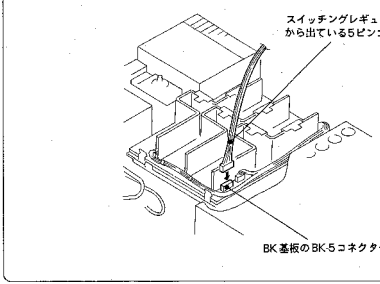
2-6 スイッチングレギュレーターの右下を仮留めする。



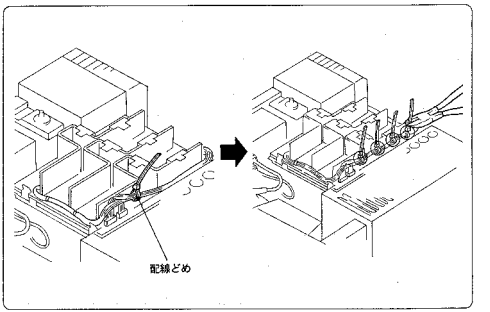
2-7 ステップ2-4でステアの内側に通した5ピンコネクターをスイッチングレギュレーターのGD1コネクターに接続する。



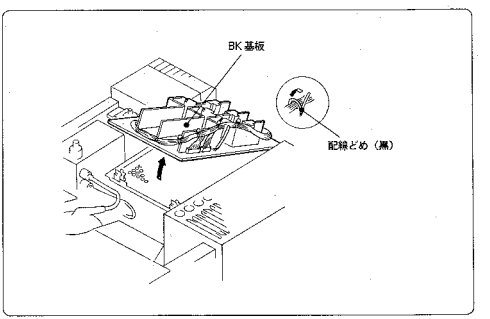
2-8 スイッチングレギュレーターのGD2から出ている5ピンコネクターをBK基板のBK-5コネクターに接続する。



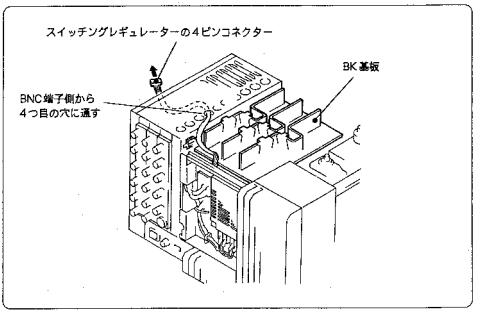
2-9 ステップ2-3で配線どめを外した場所（4箇所）を配線どめ（付属、白、4本）で留める。



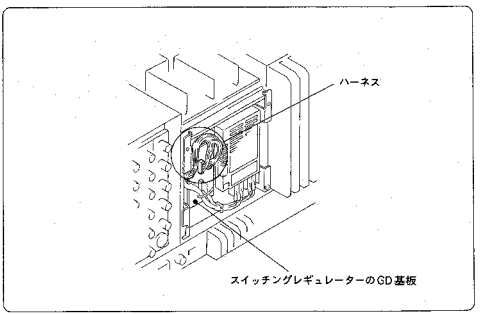
2-10 BK基板を持ち上げて、ステップ2-2で外したクランパー（黒）を留めて、BK基板をステップ2-1の逆の要領でもとに戻す。



2-11 スイッチングレギュレーターの4ピンコネクターをモニター右側面のスロット側に通す。

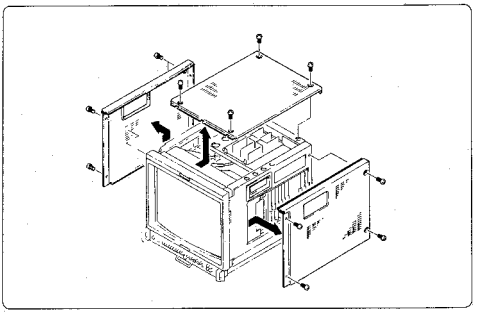


2-12 スイッチングレギュレーターのGD基板のハーネスを整える。

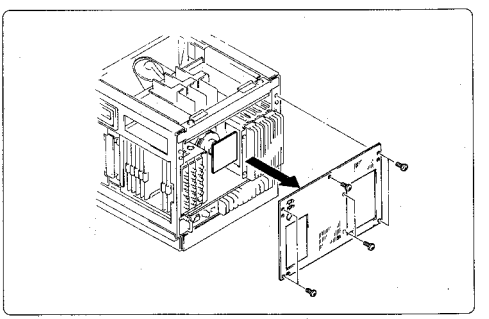


1 キャビネットの取り外し（BVM-2010／2012／2015／2011／2016の場合）

1-1 天板と両側板を外す。

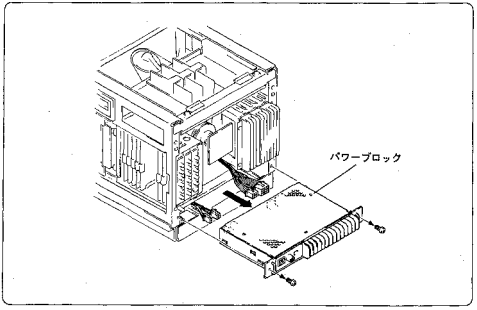


1-2 リアパネルを外す。



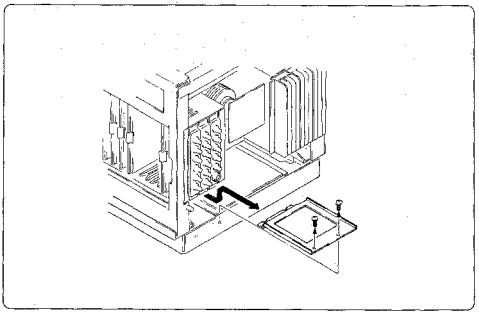
2 スイッチングレギュレーターの取り付け (BVM-2010／2012／2015／2011／2016の場合)

2-1 パワーブロックを外し、パワーブロックからコネクターを抜く。

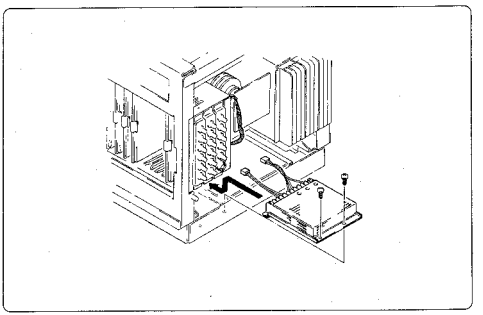


2-2 ブラケットを外す。

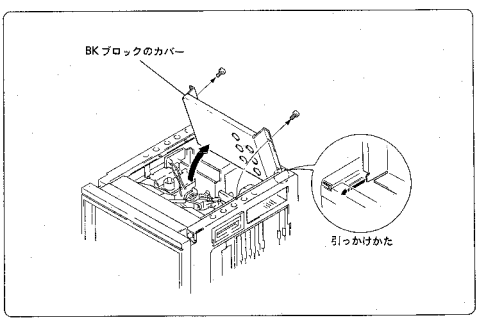
このブラケットは使用しません。



2-3 スイッチングレギュレーターを取り付ける。



2-4 BK ブロックのカバーを開けて、引っかけておく。



2-5 ステップ2-3で取り付けたスイッチングレギュレーターから出ている4ピンケーブルを基板スロット側に通す。

次の（1）～（6）の順序で行ってください。

(1) モニター右側面のBAからBJスロットに入っている基板をすべて取り外す。

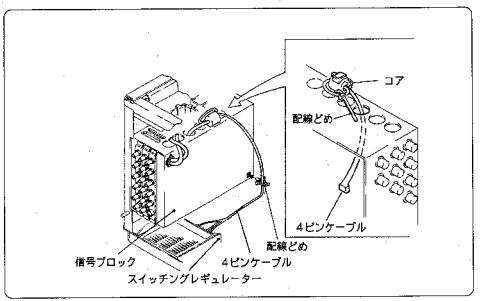
(2) 信号ブロックに配線どめ（1個、付属）を取り付ける。

(3) 4ピンケーブルを配線どめに通す。

(4) 配線どめをねじって、4ピンケーブルを締める。

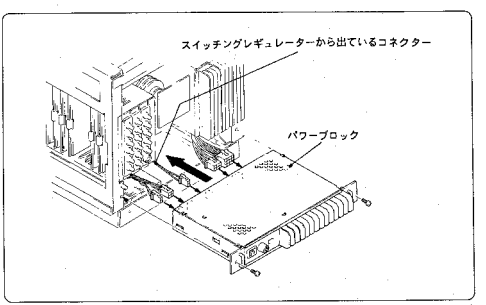
(5) 信号ブロックの上部丸穴（Inputパネルから見て3番目）に4ピンケーブルを通す。

(6) 上部丸穴の4番目と5番目の間に配線どめでコアのリード（折り曲げ部）を固定する。



2-6 ステップ2-4の逆の要領で、BKブロックを閉じる。

2-7 ステップ2-1の逆の要領で、コネクター（スイッチングレギュレーターから出ているコネクターも含む）を接続し、パワーブロックを取り付ける。



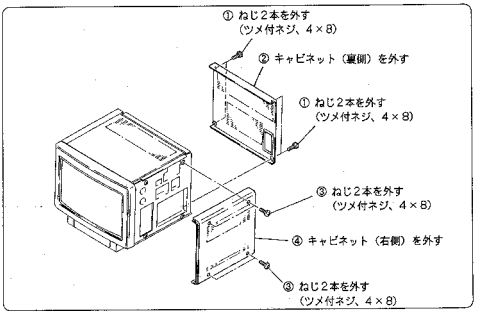
1 キャビネットの取り外し（BKM-2085-20 を BVM-3011 に装着する場合）

1-1 背面4本のねじを外す。

1-2 キャビネット（裏側）を外す。

1-3 側面4本のねじを外す。

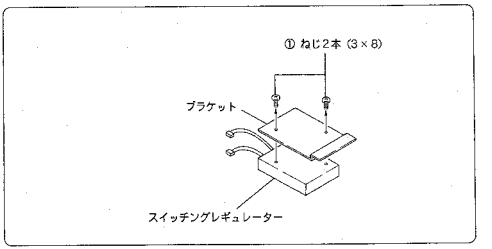
1-4 キャビネット（右側）を外す。



2 スイッチングレギュレーターの取り付け（BKM-2085-20 を BVM-3011 に装着する場合）

2-1 BKM-2085 に付属のスイッチングレギュレーターのブラケットを取り外す。

取り外したねじは、後で使用します。取り外したブラケットは使用しません。



3-1 DECORDER OUTPUTパネルのケーブルを取り外す。

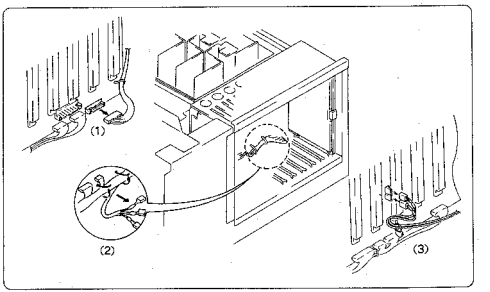
次の (1) ～ (3) の順序で行ってください。

(1) TB基板に接続されている8ピンコネクター

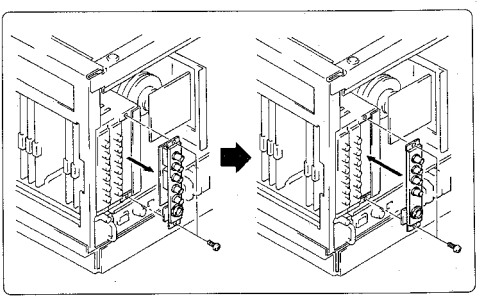
{BVM-2010／2012／2015／1410／1415の場合……(TB-6、白)
BVM-2011／2016／1411／1416の場合…… (TB-29、白または赤)} を外す。

(2) W基板に接続されている3本のコネクター (W1～W3 ; 赤、黄、白) を外し、それらのクランパーをゆるめる。

(3) TB基板に接続されている2本のコネクター (TB-4とTB-5 ; 黒と白) を外し、それらのクランパーをゆるめる。(BVM-2010／2012、BVM-1410のみ)



3-2 DECORDER OUTPUTパネルを外し、D-1 INPUTパネルを取り付ける。



4-1 D1 INPUTパネルのV2基板から出ている8ピンコネクター（白）を

{BVM-2010/2012/2015/1410/1415の場合…TB基板のTB-8コネクター（白）
BVM-2011/2016/1411/1416/3011の場合…TB基板のTB-29コネクター(白または赤)}

に差し込む。

4-2 次の2つのケーブルを配線どめで留める。

- V2基板から出ている8ピンケーブル
- V2基板から出ている2ピンケーブル

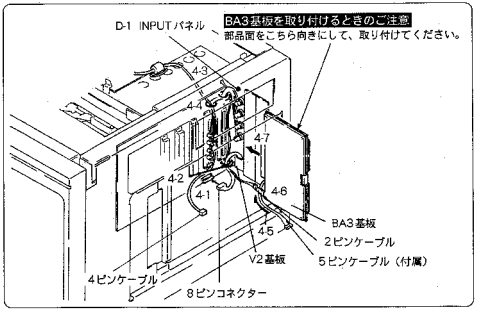
4-3 D-1 INPUTパネルから出ている4本のピンケーブルを配線どめで留める。

4-4 2-5 (5) で穴通しした 4ピンケーブルを4-3のピンケーブルと同時に配線どめで留める。
(BVM-2010／2012／2015／2011／2016／3011のみ)

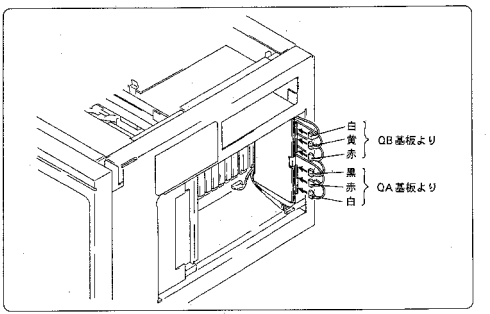
4-5 5ピンケーブル（付属）のコアに近いコネクターをBA3基板のCN-7コネクターに差し込む。

4-6 ステップ4-2でクランプした2ピンケーブルの2ピンコネクターをBA3基板のCN-8コネクターに差し込む。(BVM-2010／2012／2015／1410／1415のみ)
BVM-2011／2016／1411／1416／3011をご使用の際は接続する必要はありませんので、ステップ4-2で使用したクランパーで2ピンケーブルをとめてください。

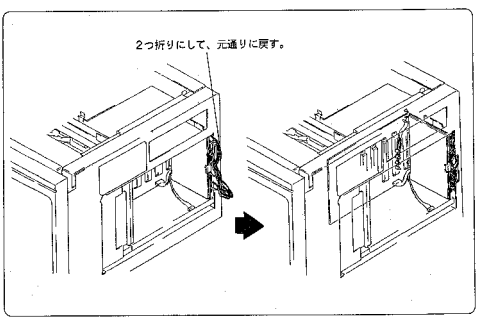
4-7 基板スロット内部のハーネス類をはさまないように、BA3基板をBAスロットに取り付ける。



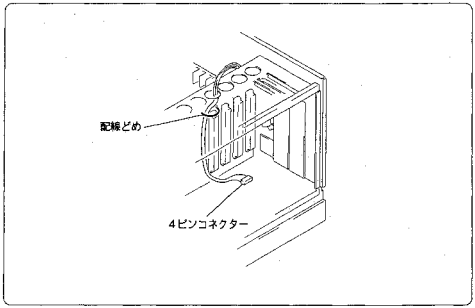
4-7 QAおよびQB基板から出ている6つのコネクターを差し込む。



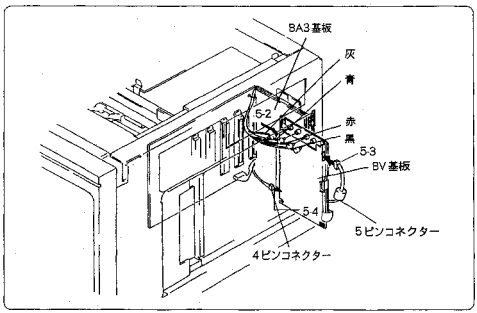
ケーブルは、下図のように処理してください。



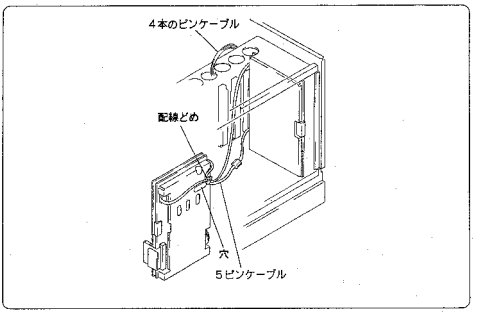
5-1 ステップ2-11で信号ブロックの穴に通した4ピンコネクターを下図の配線どめで留める。
(BVM-1410／1415／1411／1416のみ)



5-2 D-1 INPUTパネルから出ている4本のピンケーブルをBV基板に取り付ける。
5-3 BA3基板から出ている5ピンコネクターをBV基板のCN-1コネクターに差し込む。
5-4 スイッチングレギュレーターから出ている4ピンコネクターをBV基板のCN-4コネクターに差し込む。



5-5 ステップ5-2で取り付けた4本のピンケーブルとステップ4-5で差した5ピンケーブルを下図のように配線どめで留める。(BVM-1410／1415／1411／1416のみ)
(シールド板の穴の位置に注意し、下図と同じ穴位置で留める。)

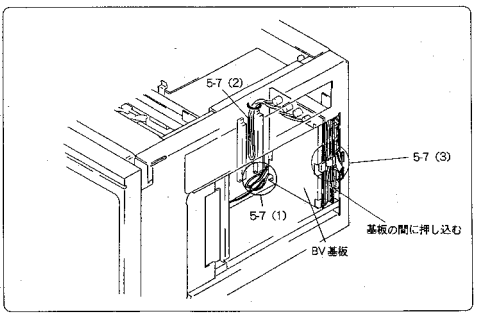


5-6 基板スロット内部のハーネスをはさまないように、BV基板をB1スロットに取り付ける。

5-7 (1) ステップ5-4でBV基板に接続した、1本のケーブルを下図のように処理する。
(BVM-2010／2011／2012／2015／2016／3011のみ)

(2) ステップ5-2でBV基板に接続した、4本のピンケーブルを下図のように処理する。
(BVM-2010／2011／2012／2015／2016／3011のみ)

(3) ステップ5-3でBV基板に接続した、5ピンコネクターを下図のように処理する。

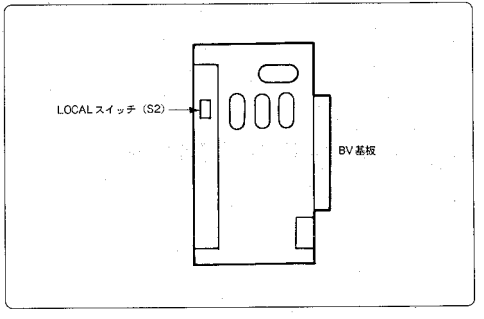


5-8 BV基板のLOCALスイッチ（S2）が下（SECAM）になっていることを確認し、異なっていた場合は、下（SECAM）に設定してください。

ご注意

BE基板（SECAMデコーダー）をご使用の際は、下記のようにLOCALスイッチ（S2）を設定してください。

1. BC基板（NTSCデコーダー）を使用する場合、LOCALスイッチ（S2）を中（PAL）に設定してください。
2. BC基板（NTSCデコーダー）を使用しない場合、LOCALスイッチ（S2）を上（NTSC）または中（PAL）に設定してください。
3. BD基板（PALデコーダー）を使用する場合、LOCALスイッチ（S2）を上（NTSC）に設定してください。
4. BD基板（PALデコーダー）を使用しない場合、LOCALスイッチ（S2）を上（NTSC）または中（PAL）に設定してください。



6 モニター右側面のスロットから取り外した基板の取り付け

モニター右側面のスロットから取り外した基板（BA基板は除く）を元通りに取り付ける。

7 ステップ1で取り外したキャビネットの取り付け

ステップ1で取り外したキャビネットを元通りに取り付ける。

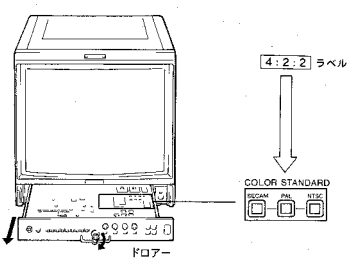
(BKM-2085-14の場合は、ステップ2-6で仮留めしたねじも外して使用してください。)

8 ラベルの貼り付け

4:2:2 ラベル（付属）を下図の位置に貼る。

(BVM-2010／2012／2015／1410／1415のみ)

ステップ5-6で切り換えたLOCALスイッチ（S2）の位置にあわせて、ドロアーの中のCOLOR STANDARDスイッチのSECAMかPALかNTSCのいずれかの表示の上にラベルを貼る。



(BVM-1410／1415／1411／1416モニターでは、ドロアーは側面にあります。)

BVM-1411／1416／2011／2016／3011を使用の場合は、本機を取り付けた後、このメニュー操作による設定を必ず行ってください。
取り付けた基板を動作させるには、以下の2つのメニュー操作による設定が必要となります。
この設定が正しくされていないと、基板が動作しない場合がありますので、ご注意ください。

1. OPTION INSTALLATIONの設定

①モニター本体のドロアー内のMENUボタンを押す。

↓

②⇩ボタンで "MONITOR CONFIG" を選択し、ENTボタンを押す。

↓

③⇩ボタンで "OPTION INSTALLATION" を選択し、ENTボタンを押す。

↓

④カーソルを "D1 OPTION" のところにもっていき、ENTボタンで設定を "YES" にする。

↓

⑤カーソルを "OTHER OPTIONS" のところにもっていき、ENTボタンを押す。
すると、"OPTION INSTALLATION 2" の画面が現われる。

↓

⑥カーソルを "SAVE AND APPLY" のところにもっていき、ENTボタンを押し、データを保存する。次に、D-1 CONFIGURATIONの設定をする。

2. D-1 CONFIGURATIONの設定

①モニター本体のドロアー内のMENUボタンを押す。

↓

②⇩ボタンで "MONITOR CONFIG" を選択し、ENTボタンを押す。

↓

③⇩ボタンで "D1 CONFIGURATION" を選択し、ENTボタンを押す。

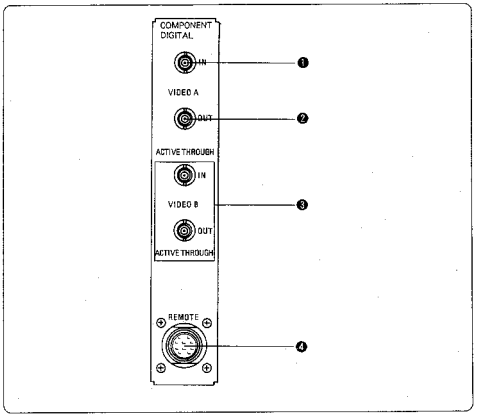
↓

④装着したBV基板のLOCALスイッチ（S2）で設定したカラーシステム（出荷設定：SECAM）と同じカラーシステムを選択し、ENTボタン押す。

↓

データが保存される。設定終了。

1-3. D-1 INPUTパネルの働き



❶ COMPONENT DIGITAL VIDEO IN A コネクター（BNC）

D-1フォーマットのシリアルビデオ信号を同軸ケーブルを使って入力します。

❷ COMPONENT DIGITAL VIDEO OUT A コネクター（BNC）

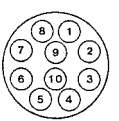
COMPONENT DIGITAL VIDEO IN A コネクターに入力した信号のアクティブスルーアウト信号（ケーブル長などによる信号劣化を補正した信号）が出力されます。

アクティブスルーアウト信号はモニターの電源で動作しているため、モニターの電源を切ると、信号は出力されません。

❸ COMPONENT DIGITAL VIDEO IN／OUT B コネクター（BNC）

COMPONENT DIGITAL VIDEO IN／OUT A コネクターのB系統です。

❹ REMOTE（リモート）端子（10ピン）



モニターに付属の10ピンコネクターを使って接続します。この端子を使ってモニターのリモートコントロールを行うときは、サブコントロールパネルのINPUT SELECTボタン「B」を押してください。

各リモートコントロール機能とピンの接続の関係は次表のとおりです。ピンNo.5とピンNo.8をショートすると、リモートコントロールになります。

入力信号*	同期信号*	AUTO/MONO モード**	ピン番号 1	2	3	4	5	6	7	9
ビデオA	INT	AUTO	O	O		O	S			O
		MONO	S							
	EXT	AUTO	O			S				
		MONO	S							
ビデオB	INT	AUTO	O	S		O				
		MONO	S							
	EXT	AUTO	O			S				
		MONO	S							
D-1入力A***	INT	AUTO	O	O	−	O				S
		MONO	S							
	EXT	AUTO	O			S				
		MONO	S							
D-1入力B***	INT	AUTO	O	S		O				
		MONO	S							
	EXT	AUTO	O			S				
		MONO	S							
VITC OFF**			O	−	−	−	−	S	−	−
			S							
VITC HOLD**			O	−	−	−	−	O	S	−
			S							
TALLY ON			O		S			−		
			S							

S：ピンNo.8とショートする

O：オープン

−：ショート、オープンいずれも可

* リモートコントロールによる動作モードは、前面パネルのINPUT、MONO MODE、D-2 INPUT A／BまたはINT／EXT SYNCセレクターの設定より優先されます。

** VITC表示をリモートコントロールするときは、まずサブコントロールパネルのVITCスイッチをONにしてから、ピンNo.5とピンNo.8（VITC OFF）、またはNo.7とNo.8（VITC HOLD）をショートしてください。（VITC表示をするには、別売りのVITCアダプターBKM-1460が必要です。）

*** D-1入力をリモートコントロールするときは、まずサブコントロールパネルのCOLOR STANDARDボタンをすべて解除（OFFに）してから、BV基板のS1（REMOTEスイッチ）を、現在使用しているアナログビデオ信号のカラーシステム（例：日本ならばNTSC位置）に合わせてください。

REMOTE（リモート）端子（BVM-1411／1416／2011／2016／3011の場合）

この端子を使ってモニターのリモートコントロールを行うときは、サブコントロールパネルのLOCAL／REMOTEボタンを押して、ボタン左のREMOTEランプを点灯させてください。

◆リモートコントロール機能については、モニター本体のマニュアルを参照してください。

リモートコントロールでD-1入力A／Bの切り換えをするときは、「1-4 入力信号の選択」に従って、前面パネルのINPUTセレクターにD-1信号A／Bを設定してから切り換えるようにしてください。

1-4. 入力信号の選択

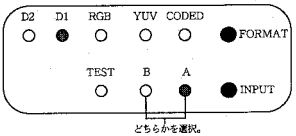
本キットを取り付けたモニターでは、下表に従って入力信号の選択を行ってください。

入力信号 / ボタン	ビデオ		Y/R-Y/B-Y	R/G/B	D-1 *	
	A	B			A	B
INPUT SELECTボタン（サブコントロールパネル）	B		COMPONENT	RGB	B	
INPUTセレクター（前面パネル）	A	B				
COLOR STANDARDボタン（サブコントロールパネル）	—				4:2:2	4:2:2

* NTSC／PALの切り換えは、サブコントロールパネルのCOLOR STANDARDボタンで行ってください。

BVM-1411／1416／2011／2016／3011を使用する場合

D-1信号をモニターするときは、ドロアー内サブコントロールパネルのFORMATボタンを押して、D1のランプを点灯させ、INPUTボタンを押して、入力チャンネルを選択します。



FORMATのD1のランプが点灯しないときは、メニュー操作でOPTION INSTALLATIONのD1 OPTIONがYESに設定されているかどうか確認してください。

前面パネルのINPUTセレクターで入力切り換えを行う場合は、以下の手順で設定をしてください。

(1) 入力信号を割り付ける前面パネルのINPUTセレクターを押す。
(前面パネルの4つのINPUTセレクターには、工場出荷時に入力信号が割り付けられていますので、割り付けを変更してもいいINPUTセレクターを選択してください。)

(2) ドロアー内のCONFIGURATIONボタンで入力信号の条件を設定します。
- FORMATボタンを押して、D1のランプを点灯させます。
- INPUTボタンを押して、入力チャンネルAchまたはBchを選択します。
- WHITE BALANCEボタンを押して、ホワイトバランスを選択します。
- ASPECTボタンを押して、画像のアスペクト比（4:3または16:9）を選択します。

(3) MENUボタンを押して、メインメニューを表示させ、⇩ボタンを押して、カーソルを"INPUT CONFIG"のところに動かして、ENTボタンを押します。

(4) 確認のメッセージが表示されますので、設定に間違いがなければ、ENTボタンを押してください。設定に間違いのあった場合は、ESCボタンを押して一度メニューを終了させ、再度設定を行ってから、手順(3)を行ってください。

1-5. 仕様

一般

電源	DC±12 V（モニターから供給）、+5 V（スイッチングレギュレーターから供給）
消費電力	BKM-2085-14／20 単体：15 W
動作温度	0 ℃～40 ℃
推奨使用温度	20 ℃～30 ℃
湿度	0～90 %（結露のない状態）

入力コネクターと信号

シリアルコンポーネントビデオ入力	
	BNC型、2系統（アクティブスルーアウト付）
伝送距離	最大200 m
	（藤倉電線（株）製の同軸ケーブル5C-2Vまたは相当品を使用時）
サンプリング周波数	Y：　13.5 MHz
	R-Y／B-Y：6.75 MHz
量子化特性	10ビット／サンプリング
カラー方式	525／60、625／50、自動切り換え
周波数帯域	Y：　100 Hz～5.75 MHz ± 1 dB
	R-Y／B-Y：100 Hz～2.75 MHz ± 1 dB
Kファクター	1 %以下（2Tパルス）

付属品

4：2：2 ラベル（2）
クランパー（7）
5ピンケーブル（1）
オペレーションアンドメンテナンスマニュアル（1式）

仕様および外観は、改良のため予告なく変更することがありますが、ご了承ください。

SECTION 1 OPERATION

1-1. Overview

The BKM-2085-14 is a D-1 format video signal input kit for Sony BVM-1310/1315/1410P/1410PM/1415P/1311/1411P/1316/1416P color video monitors.
The BKM-2085-20 is a D-1 format video signal input kit for Sony BVM-1910/1912/1915/2010P/2010PM/2012P/2015P/1911/2011P/1916/2016P/3011P color video monitors. By installing this kit in the monitor, inputting two D-1 format serial video signals with coaxial cable becomes possible.

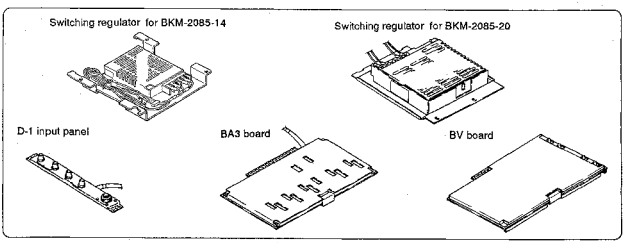
- **Active-through output**
  Each input channel is provided with an active buffered output which allows the signal to be distributed to other equipment up to 200 m* (656 feet) away.
  * Max. 200m transmission is guaranteed only when a specific cable is used. The cable should be a 75 ohm coaxial one assuring signal deterioration less then 25 dB in a condition of 10 MHz signal transmission with 1 km length. (Ex. Fujikura's 5C-2V (RG-6A/U) cable)

Note The kit below can not be used when you install the BKM-2085-14/20 in the monitor:

Kit	Function
BKM-1440 RGB/Component Adaptor	All functions
BKM-2080 Digital 4 : 2 : 2 Adaptor	
BKM-2090-14/20 D-2 Serial Input Adaptor Kit	
BKM-2056 Auto Setup Adaptor	— Storing the color temperature from another reference monitor (not in the auto setup system) — Reading the color data from a monitor not in the auto setup system *For details of these functions, read the operation manual.*

Components

Only the switching regulator is different between the BKM-2085-14 and the BKM-2085-20.



1-2. Installation

Install the kit in the monitor as follows.

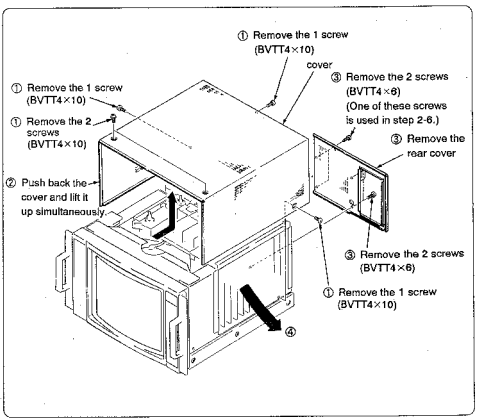
1 Detach the covers
2 Mount the switching regulator
3 Attach the D-1 INPUT panel
4 Mount the BA3 board
5 Mount the BV board
6 Replace the removed boards
7 Replace the covers removed in step 1
8 Affix the label
9 Menu setting

Only these steps are different between the BKM-2085-14 and the BKM-2085-20.

For the BKM-2085-14 and the BKM-2085-20.

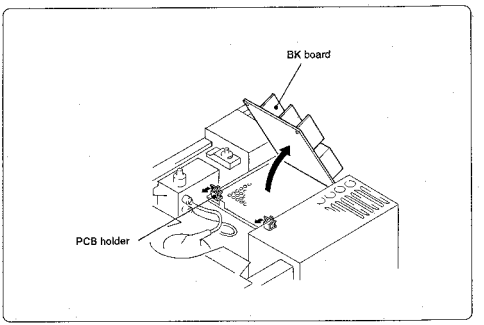
1 Detaching the covers (for the BVM-1310/1315/1410P/1410PM/1415P/1311/1411P/1316/1416P)

1-1 Remove the 2 screws from the side, the 1 screw from the rear cover and the 2 screws from the top on the cover.
1-2 Remove the cover by pushing back and lifting up simultaneously.
1-3 Remove the 4 screws holding the rear cover, then remove the cover.
1-4 Remove circuit boards BA through BJ, from the right side of the monitor.

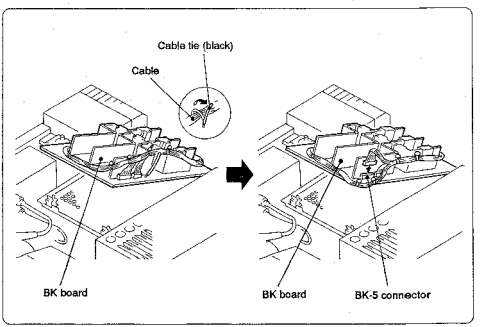


2 Mounting the switching regulator (for the BVM-1310/1315/1410P/1410PM/1415P/1311/1411P/1316/1416P)

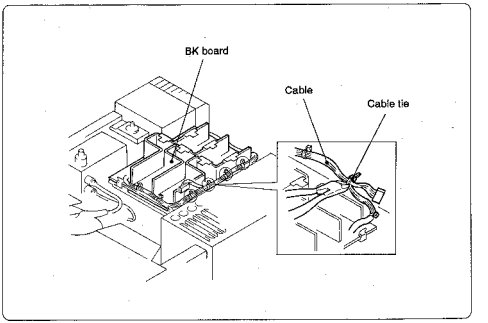
2-1 Open the two PCB (Printed Circuit Board) holders on the BK board and lift up the BK board.



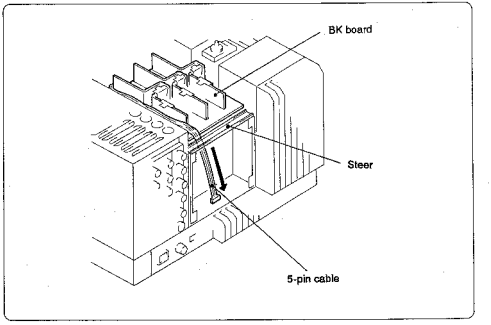
2-2 Loosen the cable tie (the BKM-1310/1410P/1410PM/1311/1411P: 2 ties, the BKM-1315/1415P/1316/1416P: 3 ties), disconnect BK-5 connector (5-pin) and push down the BK board.



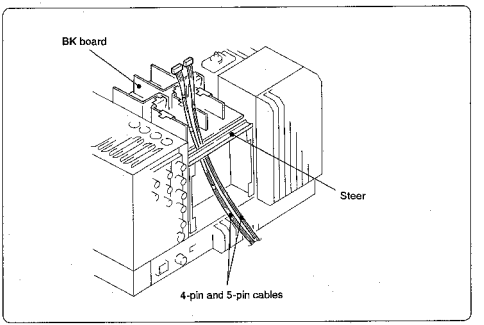
2-3 Cut 4 cable ties (white) using a nipper, taking care not to clip the cables. Memorize the securing position so that you can secure the same positions in step 2-9.



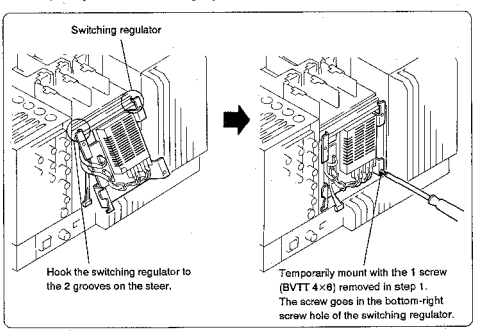
2-4 Take the 5-pin cable disconnected in step 2-2 and pass it down through the inside of the steer.



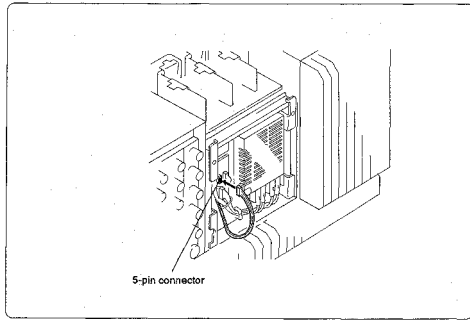
2-5 Pass up the switching regulator 4-pin and 5-pin cables (component, for the BKM-2065 -14) through the inside of the steer.



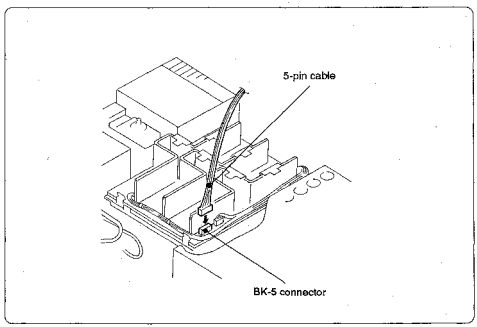
2-6 Temporarily mount the switching regulator.



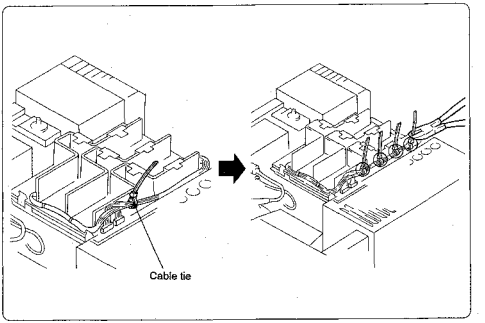
2-7 Connect the 5-pin connector routed through the inside of the steer in step 2-4 to the GD1 connector of the switching regulator.



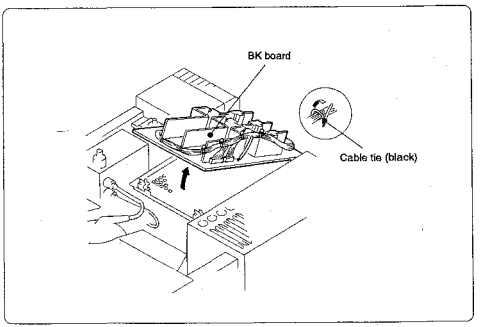
2-8 Connect the 5-pin cable, leading from the GD2 of the switching regulator, to the BK-5 connector on the BK board.



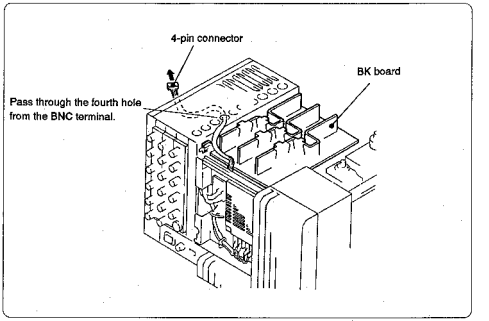
2-9 Secure the cables with 4 new cable ties (supplied) at the positions where the 4 cable ties have been removed in step 2-3.



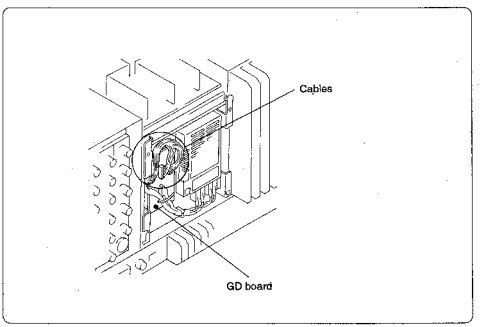
2-10 Lift up the BK board, secure the cables with the cable ties loosened in step 2-2 and replace the BK board in the reverse sequence of step 2-1.



2-11 Pass the switching regulator 4-pin connector through the opening in the signal block, to the printed circuit board slot side from the right side of the monitor.

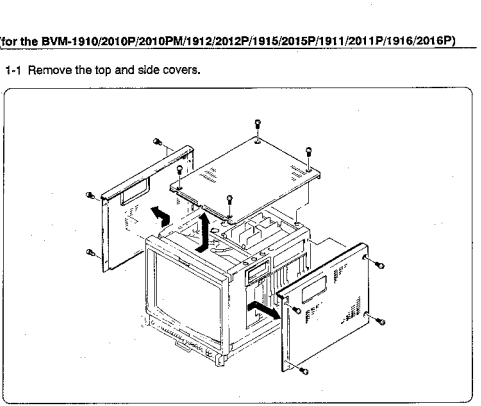


2-12 Arrange the cables on the GD board of the switching regulator.

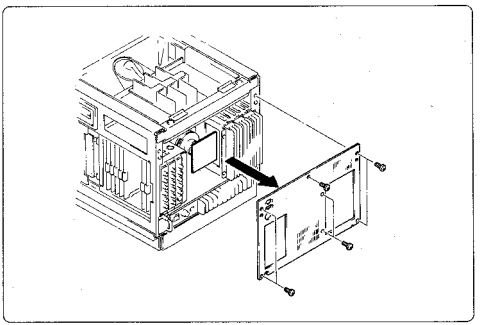


1 Detaching the covers (for the BVM-1910/2010P/2010PM/1912/2012P/1915/2015P/1911/2011P/1916/2016P)

1-1 Remove the top and side covers.

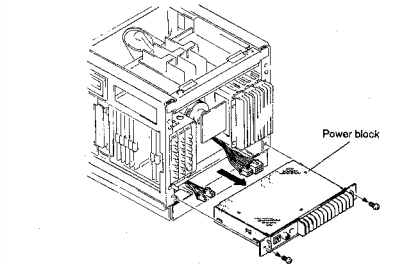


1-2 Remove the rear cover.

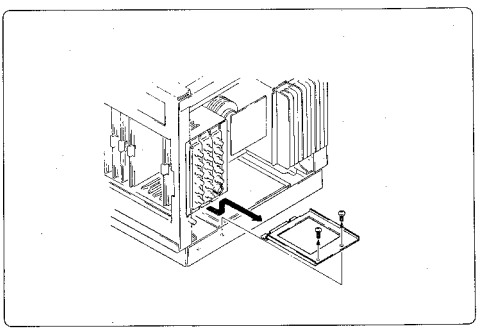


2 Mounting the switching regulator (for the BVM-1910/2010P/2010PM/1912/2012P/1915/2015P/1911/2011P/1916/2016P)

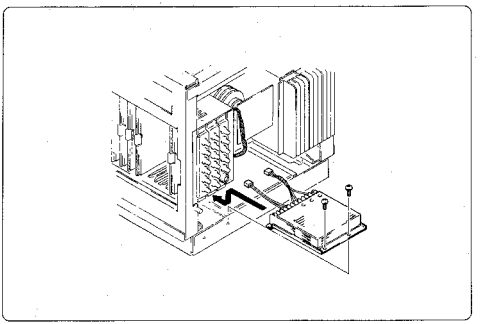
2-1 Remove the power block and disconnect the cables from the power block.



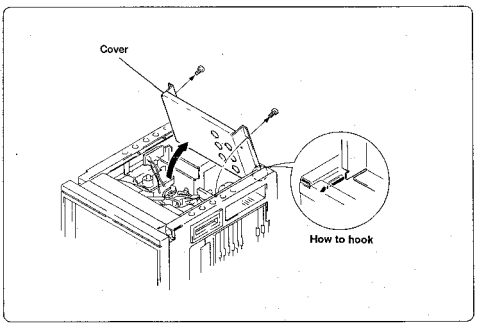
2-2 Remove the bracket.
The bracket itself is not used.



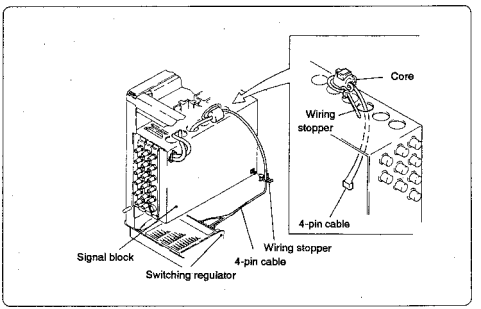
2-3 Mount the switching regulator.



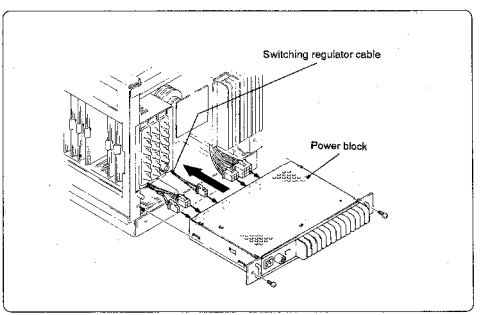
2-4 Open and hook the cover of the BK block.



2-5 Pass the switching regulator 4-pin cable through the opening in the signal block, to the printed circuit board slot side.
(1) Remove circuit boards BA through BJ, from the right side of the monitor.
(2) Attach the 1 supplied wiring stoppers to the signal block.
(3) Pass the 4-pin cable through the wiring stopper.
(4) Twist the wiring stopper to tighten the cable.
(5) Pass the 4-pin cable through the round hole on the signal block (third hole as seen from the input panel).
(6) Secure the core lead (bent part) between the fourth and fifth round holes on the signal block using the wiring stopper.

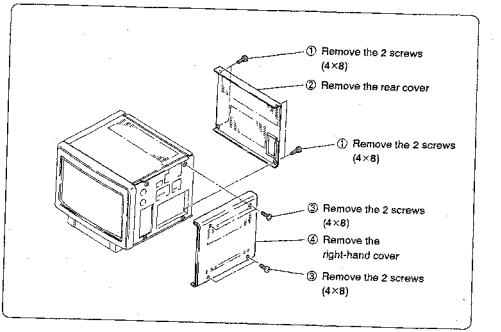


2-6 Close the BK block in the reverse sequence of step 2-4.
2-7 Connect the cables (including the switching regulator cable) and replace the power block in the reverse sequence of step 2-1.



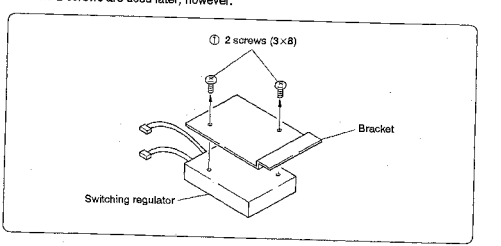
1 Detaching the covers (When installing the BKM-2085-20 in the BVM-3011P)

1-1 Remove the 4 screws holding the rear cover.
1-2 Remove the rear cover.
1-3 Remove the 4 screws holding the right-hand cover.
1-4 Remove the right-hand cover.

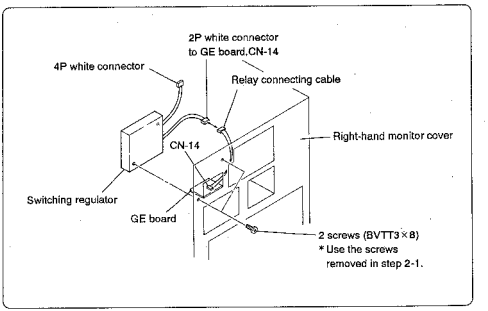


2 Mounting the switching regulator (When installing the BKM-2085-20 in the BVM-3011P)

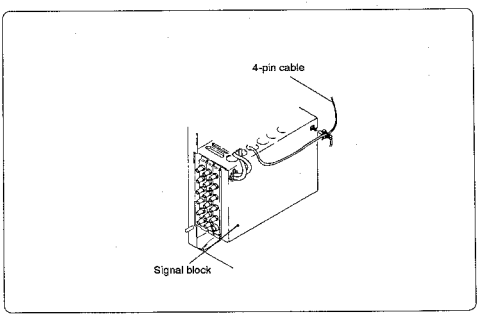
2-1 Remove the bracket attached to the BKM-2085-20.
The bracket itself is not used.
The 2 screws are used later, however.



2-2 Mount the switching regulator.
(1) Mount the switching regulator inside the monitor's right cover, fixing it with the screws removed in step 2-1.
(2) Connect the 2-pin cable of the switching regulator to the CN-14 relay connecting cable attached to the GE board.



2-3 Pass the switching regulator 4-pin cable through the opening in the signal block, to the printed circuit board slot side.
(1) Remove circuit boards BA through BJ, from the right side of the monitor.
(2) Attach the supplied cable tie to the signal block.
(3) Pass the 4-pin cable through the wiring stoppers.
(4) Secure the 4-pin cable by twisting the wiring stoppers.



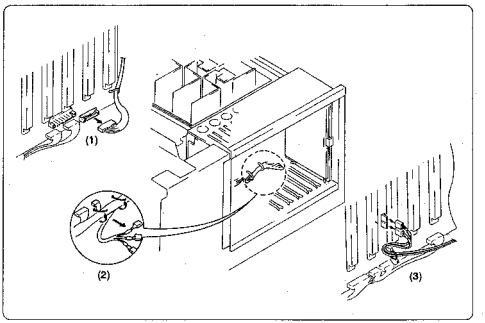
3 Attaching the D-1 INPUT panel

3-1 Remove the DECODER OUTPUT panel cables.

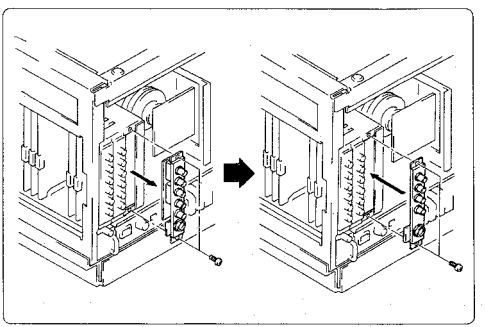
(1) Disconnect the 8-pin cable from the TB board.
BVM-1910/2010P/2010PM/1912/2012P/1915/2015P/1310/1410P/1410PM/1315/1415P ..... (TB-6, white)
BVM-1911/2011P/1916/2016P/1311/1411P/1316/1416P (TB-29, red or white)

(2) Disconnect the three 2-pin cables (W1, W2 and W3; red, yellow and white), then loosen the cable tie.

(3) Disconnect the two 3-pin cables (TB-4 and TB-5; black and white) from the B board, then loosen the cable tie.
(For the BVM-1310/1410P/1410PM/1910/1912/2010P/2010PM/2012P only)



3-2 Remove the DECODER OUTPUT panel and install the D-1 INPUT panel in the same location.



4-1 Connect the 8-pin cable (with the white connector), leading from the V2 board of the D-1 INPUT panel, as follows.
For the BVM-1910/2010P/2010PM/1912/2012P/1915/2015P/1310/1410P/1410PM/1315/1415P ····· Connect the cable to connector TB-6 of the TB board (white)
For the BVM-1911/2011P/1916/2016P/1311/1411P/1316/1416P/2811/3011P ····· Connect the cable to connector TB-29 of the TB board (white or red)

4-2 Secure the following cables.
– The 8-pin cable connected in step 4-1
– The 2-pin cable connected to the V2 board

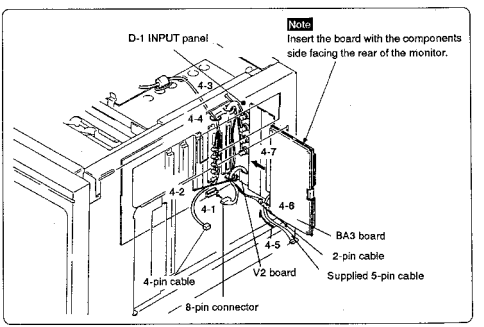
4-3 Secure the four pin cables from the D-1 INPUT panel with the wiring stopper.

4-4 Secure the 4-pin cable passed through the hole in step 2-5 (5) together with the 4-pin cable in step 4-3 with the wiring stopper.
(BVM-1910/1911/1912/1915/1916/2010P/2011P/2012/2015P/2016/2811/3011P)

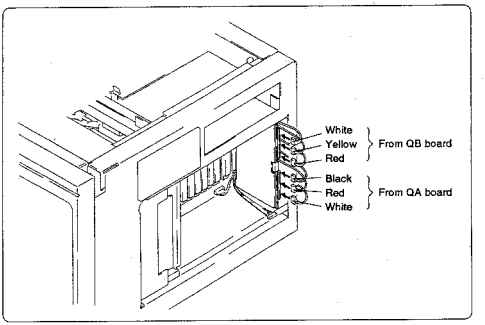
4-5 Insert the connector near to the core of the 5-pin cable (provided) into the CN-7 connector of the BA3 board.

4-6 Connect the 2-pin cable secured in step 4-2 to connector CN-8 of the BA3 board (For the BVM-1910/2010P/1912/2012P/1915/2015P/1310/1410P/1410PM/1315/1415P only).
The above connection need not be made for the BVM-1911/2011P/1916/2016P/1311/1411P/1316/1416P/2811/3011P. Secure the 2-pin cable with the cable tie used in step 4-2.

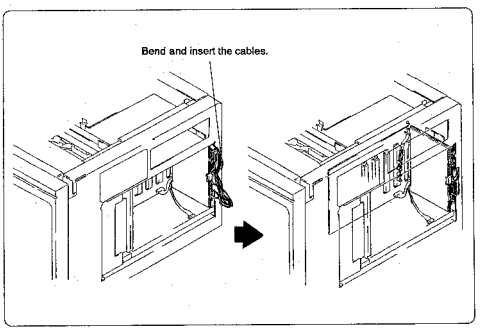
4-7 Install the BA3 board in the BA slot, taking care not to pinch the cables inside the slots.



4-7 Connect the 6 connectors leading from QA and QB boards.

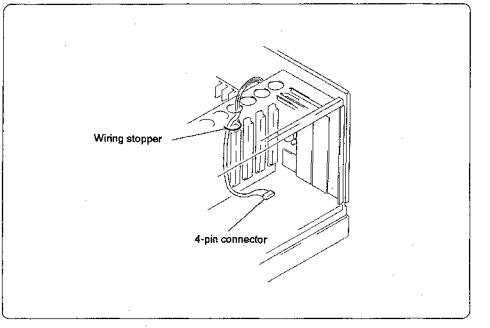


Arrange the cables as shown below.

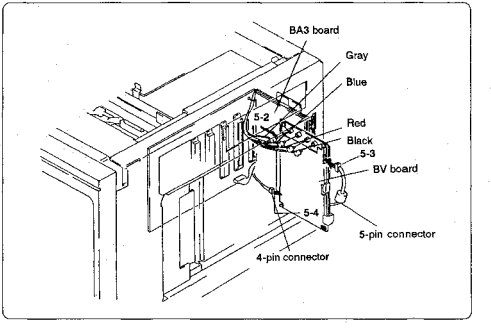


5 Attaching the BV board

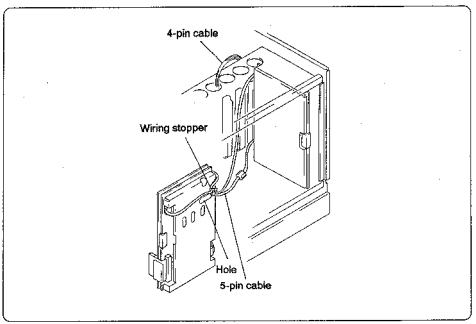
5-1 Secure the 4-pin connector passed through the hole in the signal block in step 2-11 using the wiring stoppers shown in the following figure.
(BVM-1310/1315/1311/1316 only)



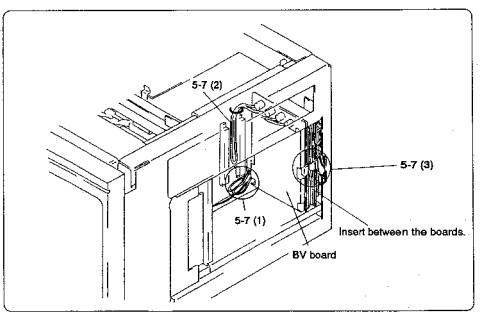
5-2 Connect the 4-pin cables, leading from the D-1 INPUT panel, to the connectors CN-101, 102, 201 and 202 of the BV board.
5-3 Connect the 5-pin cable, leading from the BA3 board, to the connector CN-1 of the BV board.
5-4 Insert the 4-pin connector from the switching regulator into the CN-4 connector of the BV board.



5-5 Secure the 4-pin cable connected at step 5-2 and the 5-pin cable inserted at step 4-5 as shown in the following figure with the wiring stopper.
(BVM-1310/1311/1315/1316/1410P/1411P/1415P/1416P)
(Secure at the positions shown in the figure below, taking careful note of the holes on the shield plate.)



5-6 Install the BV board in the B1 slot, taking care not to pinch the cables inside the slots.
5-7 (1) Arrange the cable connected in step 5-4 as shown below.
(BVM-1910/1911/1915/1916/2010P/2011P/2012P/2015P/2016P/2811/3011P)
(2) Adjust the four pin cables connected to the BV board in step 5-2 as shown in the figure.
(BVM-1910/1911/1915/1916/2010P/2011P/2012P/2015P/2016P/2811/3011P)
(3) Adjust the 5-pin connector connected to the BV board in step 5-3 as shown in the left figure.

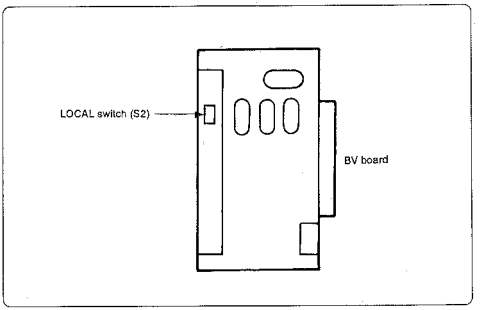


5-8 Ensure that the LOCAL switch (S2) of the BV board is set to its lowermost position (SECAM).

Note

If you are using the BE board (SECAM decoder), however, set the LOCAL switch (S2) as follows:

1. When you are also using the BC board (NTSC decoder), set the LOCAL switch (S2) to its center position (PAL).
2. When you are not using the BC board (NTSC decoder), set the LOCAL switch (S2) to its uppermost position (NTSC) or center position (PAL).
3. When you are also using the BD board (PAL decoder), set the LOCAL switch (S2) to its uppermost position (NTSC).
4. When you are not using the BD board (PAL decoder), set the LOCAL switch (S2) to its uppermost position (NTSC) or center position (PAL).



6 Replacing the boards removed from the right-hand side on the monitor

Replace the boards (except the BA board) removed from the right-hand side on the monitor.

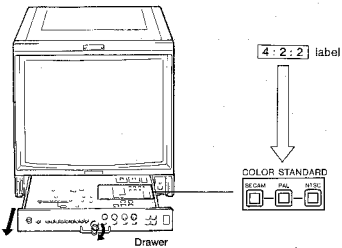
7 Replacing the covers removed in step 1

Replace the covers removed in step 1.
(For the BKM-2085-14, remove and use the screw temporarily attached in step 2-6.)

8 Affixing the label

Affix the supplied 4 : 2 : 2 label as shown below.
(For the BVM-1910/2010P/2010PM/1912/2012P/1915/2015P/1310/1410P/1410PM/1315/1415P only)

According to the position of the LOCAL switch (S2) set in step 5-8, affix the label above the appropriate color switch (SECAM, PAL or NTSC) in the drawer.



(For the BVM-1310/1315/1410P/1410PM/1415P/1311/1411P/1316/1416P color video monitor, The drawer pulls out from the right-hand side.)

For the BVM-1311/1411P/1316/1416P/1911/2011P/1916/2016P/3011P, several setup menu items must be set after installing the switching regulator.

To activate the installed boards, the following items must be set. Note that the boards will not operate until the following procedure has been successfully completed.

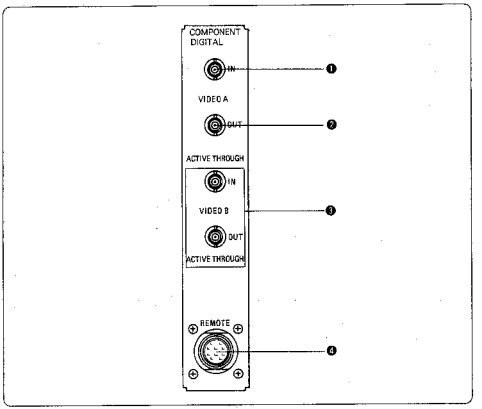
1 Setting the OPTION INSTALLATION

① Press the MENU button in the monitor drawer.
② Using the ⇩ button, position the cursor to "MONITOR CONFIG", then press the ENT button.
③ Using the ⇩ button, position the cursor to "OPTION INSTALLATION", then press the ENT button.
④ Position the cursor to "D1 OPTION", then select "YES" by pressing the ENT button.
⑤ Position the cursor to "OTHER OPTIONS", then press the ENT button. The "OPTION INSTALLATION 2" screen will appear.
⑥ Position the cursor to "SAVE AND APPLY", then press the ENT button to save the data. Then, set the D-1 CONFIGURATION.

2 Setting the D-1 CONFIGURATION

① Press the MENU button in the monitor drawer.
② Using the ⇩ button, position the cursor to "MONITOR CONFIG", then press the ENT button.
③ Using the ⇩ button, position the cursor to "D-1 CONFIGURATION", then press the ENT button.
④ Select the same color system as that set with the LOCAL switch of the installed BV board (Factory setting: SECAM) The data is saved. This completes the setup.

1-3. Function of D-1 INPUT Panel



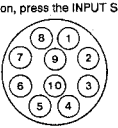
1 COMPONENT DIGITAL VIDEO A IN connector (BNC)
Inputs the D-1 format serial video signal using a coaxial cable.

2 COMPONENT DIGITAL VIDEO A OUT connector (BNC)
Outputs the active-through out signal (the signal that corrects cable loss) of the COMPONENT DIGITAL VIDEO A IN signal.
The active-through out is not output when the monitor's power is turned off.

3 COMPONENT DIGITAL VIDEO B IN/OUT connector (BNC)
The "B" channel of the COMPONENT DIGITAL VIDEO A IN/OUT connectors.

4 REMOTE connector (10-pin)
Use the 10-pin connector supplied with the monitor. The illustration below shows the pin assignment of the connector.

Note
For remote control operation, press the INPUT SELECT "B" button inside the drawer.



To enter remote control mode, short-circuit pin No.5 with pin No.8.
The relationships between the remote control functions and pin connections are shown below.

Function			Pin No.							
INPUT[1]	SYNC[1]	MODE[1]	1	2	3	4	5	6	7	9
VIDEO A	INT	AUTO	O	O	–	O	S	–	–	O
		MONO	S							
	EXT	AUTO	O			S				
		MONO	S							
VIDEO B	INT	AUTO	O	S		O				
		MONO	S							
	EXT	AUTO	O			S				
		MONO	S							
D-1 A[3]	INT	AUTO	O	O		O				S
		MONO	S							
	EXT	AUTO	O			S				
		MONO	S							
D-1 B[3]	INT	AUTO	O	S		O				
		MONO	S							
	EXT	AUTO	O			S				
		MONO	S							
VITC OFF[2]			O	–	–	–	–	S	–	–
			S							
VITC HOLD[2]			O	–		–	–	O	S	–
			S							
TALLY ON			O	–	S	–	–	–		–
			S							

S : Short-circuit with pin No.8.
O : Open
– : Either S or O.

1) Remote control operation has priority over the INPUT, MONO MODE, D-2 INPUT A/B or INT/EXT SYNC selectors on the front panel.
2) To enable remote control of the VITC display, first set the VITC switch of the sub control panel to ON, then short-circuit pin No.6 with pin No.8 (VITC OFF) or pin No.7 with pin No.8 (VITC HOLD). (For the VITC display, the optional BKM-1460 is required.)
3) To enable remote control of the D-1 input signal, first set the COLOR STANDARD button of the sub control panel to OFF (release), then set the S1 (REMOTE switch) of the BV board to the appropriate color system. (Ex. for use in the United States, set to the NTSC position)

REMOTE connector

(For the BVM-1311/1411P/1316/1416P/1911/2011P/1916/2016P/2811/3011P)
To enable remote control of the monitor through this connector, press the LOCAL/REMOTE button on the sub control panel. The REMOTE indicator to the left of the button will light.
For details of remote control operation, refer to your monitor's instruction manual.

Before attempting to switch D-1 INPUT A/B by remote control, set D-1 signal A/B to the front panel INPUT selector, as explained in "1-4. Selecting Input Signals".

1-4. Selecting Input Signals

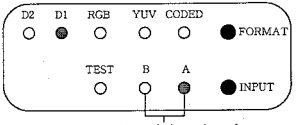
When the unit is installed in the monitor, select the input signal as shown below.

Input signal / Button	Video A	Video B	Y/R-Y/B-Y	R/G/B	D-1* A	D-1* B
INPUT SELECT button (Sub control panel)	B		COMPONENT	RGB	B	
INPUT selector (Front panel)	A	B				
D-2 INPUT A/B selector (Front panel)	–				4:2:2	4:2:2

* Select the NTSC/PAL signal by the COLOR STANDARD button of the sub control panel.

For the BVM-1311/1411P/1316/1416P/1911/2011P/1916/2016P/3011P

To monitor the D-1 signals, press the FORMAT button of sub control panel in the drawer. The D-1 indicator will light. Then, press the INPUT button to select the input channel.



Select either of these channels.

If the D-1 indicator does not light, check that the "D-1 OPTION" of "OPTION INSTALLATION" menu is set to "YES".

To switch the input signals with the front panel INPUT selector, follow the procedure below.

(1) Press the front panel INPUT selector corresponding to input signal setting to be made.
(The factory setting corresponds to the four INPUT selectors on the front panel. Select an INPUT selector for which changing the settings will cause no problems.)

(2) Set the input signal with the CONFIGURATION button in the drawer.
- Press the FORMAT button. The D-1 indicator will light.
- Press the INPUT button to select Ach or Bch.
- Press the WHITE BALANCE button to set the white balance.
- Press the ASPECT button to select the aspect ratio (4: 3 or 16: 9).

(3) Press the MENU button to display the main menu. Position the cursor to "INPUT CONFIG", then press the ENT button.

(4) A confirmation message appears. If the settings are satisfactory, press the ENT button. Otherwise, press the ESC button to close the menu and repeat the setting procedure.

General

Power requirements	DC ± 12 V (supplied from the monitor) and DC +5 V (supplied from the switching regulator)
Power consumption	BKM-2085-14/20: 15 W
Operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Recommended operating temperature	20 °C to 30 °C (68 °F to 86 °F)
Humidity	0 to 90 % (not-condensed)

Input connectors and signals

Input performance	Serial component (INPUT A/B), BNC connector
Output performance	Serial component (INPUT A/B), active-through output BNC connector
Transmission distance	Max. 200 m (656 feet) (When using a coaxial cable 5C-2V (Fujikura America Inc, Fujikura Europe Ltd. (FEL) or the equivalent.))
Sampling frequency	Y : 13.5 MHz R-Y/B-Y : 6.75 MHz
Quantization	10 bits/sampling
Color system	525/60 or 625/50 system, manual selection
Bandwidth	Y : 100 Hz to 5.75 MHz ± 1 dB R-Y/B-Y : 100 Hz to 2.75 MHz ± 1 dB
K factor	Less than 1 % (2T pulse)

Supplied accessories

4 : 2 : 2 label (2)
Cable ties (7)
5-pin cable (1)
Operation and maintenance manual (1)

Design and specifications are subject to change without notice.

第２章
回路説明

2-1. BA3基板

2-1-1. 入力回路

Hook up
Q101～Q105で構成され，同相成分除去を行います。図1の回路において，A，B各々の入力のGAINは

$$A = \frac{Rc}{Ri},\ B = -\frac{Rc}{Ri}$$

Aに入力ec＋ei，Bに入力ec-eiを加えるとeoは

$$eo = \frac{Rc}{Ri}(ec + ei) + (-\frac{Rc}{Ri})(ec - ei) = 2\frac{Rc}{Ri}ei$$

となり，ecが消去され同相成分は出力されません。Hook up回路では特性改善の為，NF（Negative Feedback）AMPで構成していますが同様です。他の系統も同様です。

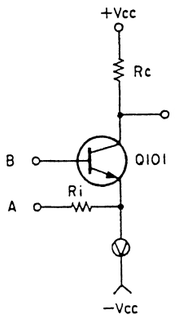


図1

INPUT SELECT SW, SYNC SELECT SW
INPUT SELECT SW IC1でVIDEO A／B，G／Y（Component）の信号の選択を行い，SYNC SELECT SW IC3，4でSYNC信号のINT／EXTの選択を行います。

2-1-2. 同期分離回路

SYNC AGC
L.P.F（Q701），可変増幅器（Q702～Q705）AMP（Q706，Q707），バイアスコントロール回路（Q708～Q710），ゲインコントロール回路（Q711，Q712）より構成されています。図2のeo（Q707のコレクタ）には，反転したCOMPOSITE VIDEO（SYNC）信号が出力されます。バイアスコントロール回路は，eoの最大値とE1（Q708のベース電圧）を比較し，一致するようにAMPのバイアスをコントロールします。また，ゲインコントロール回路は，eoのペデスタル電圧とE2（Q711のベース電圧）を比較し一致するように可変増幅器のゲインをコントロールします。

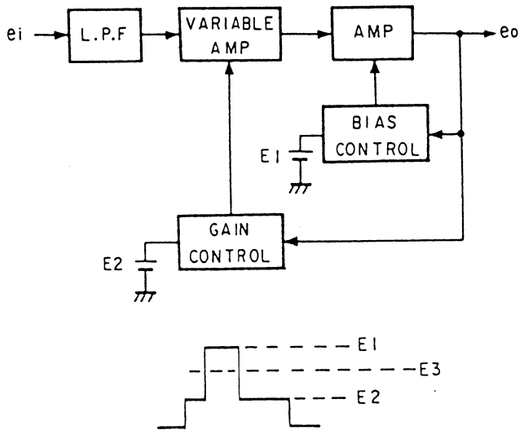


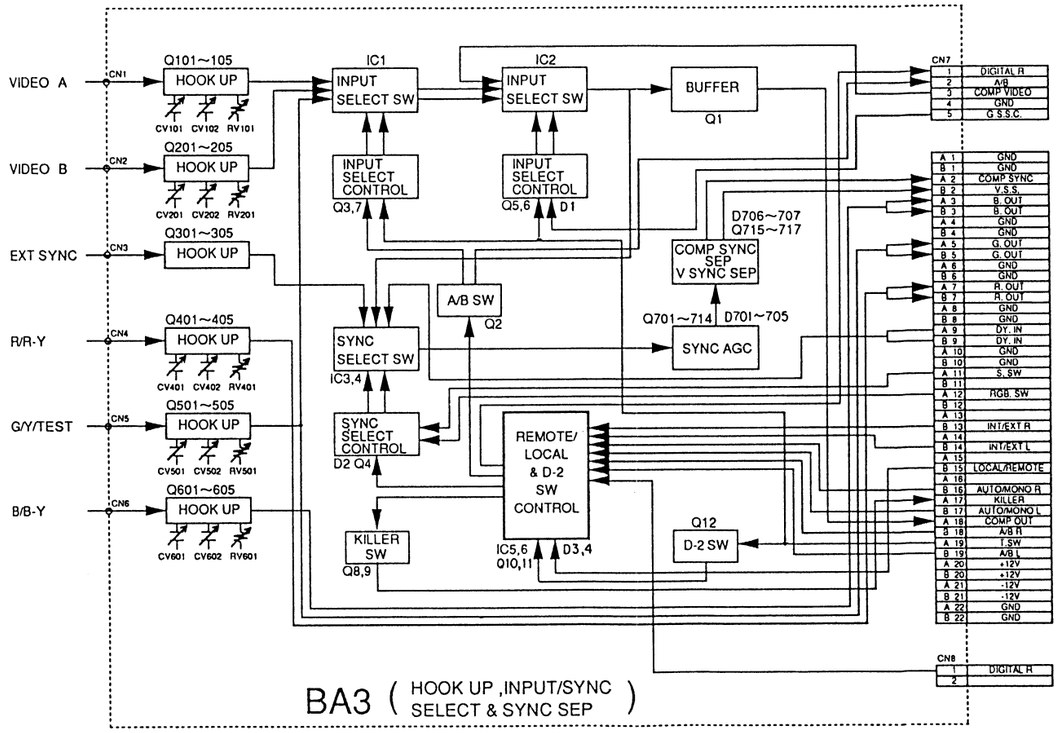
図2

COMP.SYNC SEP, V SYNC SEP
Q713～Q715によりE3（Q713のベース電圧）と比較し，同期分離します。また，この信号はL.P.F（Q716）で水平成分を除去し，Q717で垂直同期分離します。

2-1-3. 動作モード切り換え回路

REMOTE／LOCAL & D2 SW CONTROL
本体セットのコントロールモード（REMOTE／LOCAL）に応じて，INPUT SELECT SW及びSYNC SELECT CONTROL用の信号を生成します。

BA3基板ブロックダイヤグラム



2-2. BV1 基板

S／P CONVERTER
入力されたD-1シリアル信号（270MHz）をIC101（IC201）で，シリアル→パラレル変換し，ECL レベルで出力します。

CABLE DRIVER
IC101（IC201）で，ケーブルの損失補償を行った信号を，Q101～103（Q201～203）で構成するAMP回路を通して，アクティブスルーアウトとして出力します。

ECL／TTL 変換
入力チャンネルの設定で選択されたチャンネルの信号（ECL level）を，ECL／TTL変換Device（IC8，9，10）に入力し，TTL レベルに変換します。

D-1 DECODER
入力されたパラレルD-1信号を，IC11（D-1 Decoder）で，Y／R-Y／B-Y のDigital信号に変換して出力します。

COMP.SYNC.GEN.
D-1 Decoder（IC11）より出力される，H（水平周期），F（フィールド周期）の信号を基準として，同期信号用のタイミング pulse を生成します。

2-3. BV2 基板

2-3-1. Buffer及びBuffer ＆ Delay回路

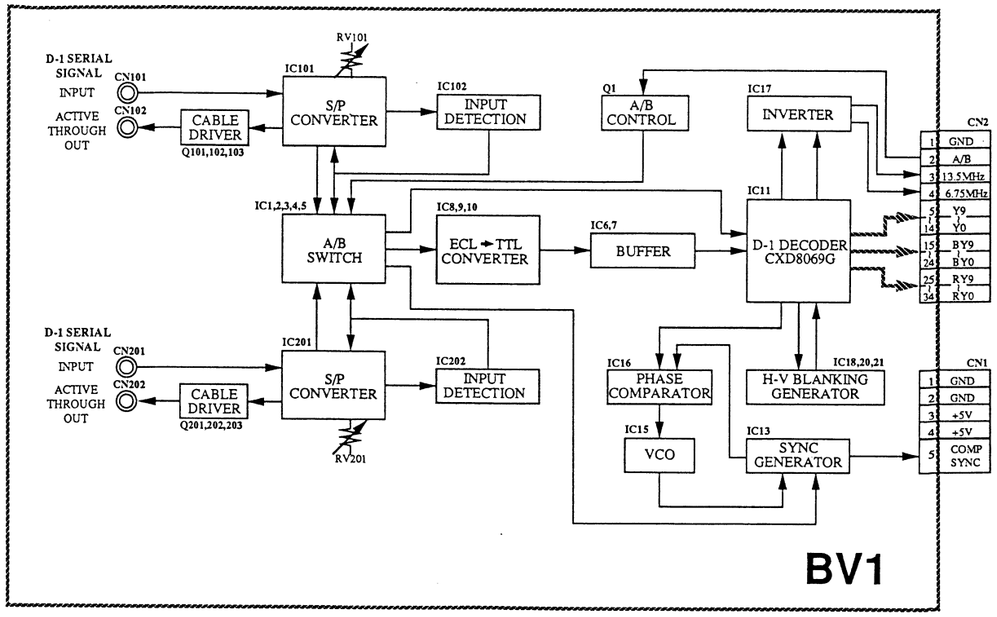
入力されたDigital Y／R-Y／B-Y信号をラッチ（latch）し，Y信号は，Delay回路を通すことによって，R-Y／B-Y信号とtimingをあわせます。

D／A CONVERTER
Digital Y／R-Y／B-Y信号をDAC（IC101，201，301）でAnalog信号に変換し，L.P.F によって，帯域制限を行います。

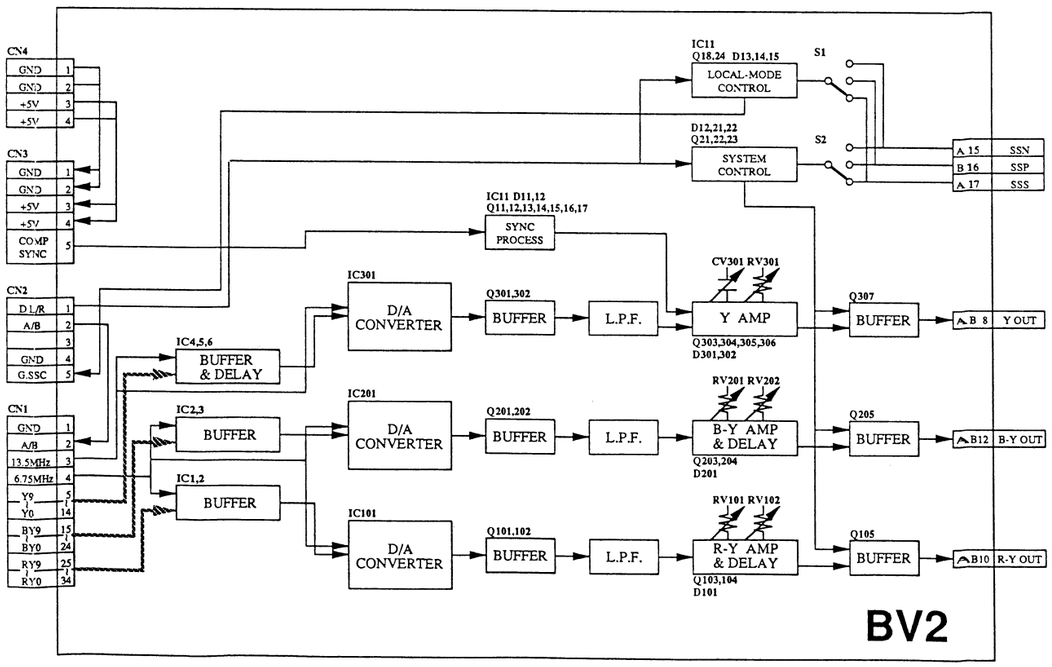
2-3-2. Y AMP及びR-Y／B-Y AMP ＆ Delay回路

Analog信号に変換された，Y／R-Y／B-Y信号のGain及び，Delay timeの調整を行い，出力します。尚，Y信号に同期信号を加算し，コンポジットY信号を生成しています。

BV1 基板　ブロックダイヤグラム



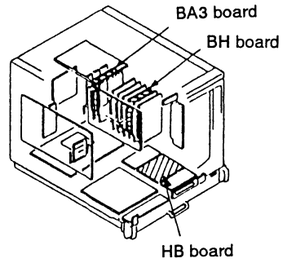
BV2 基板　ブロックダイヤグラム



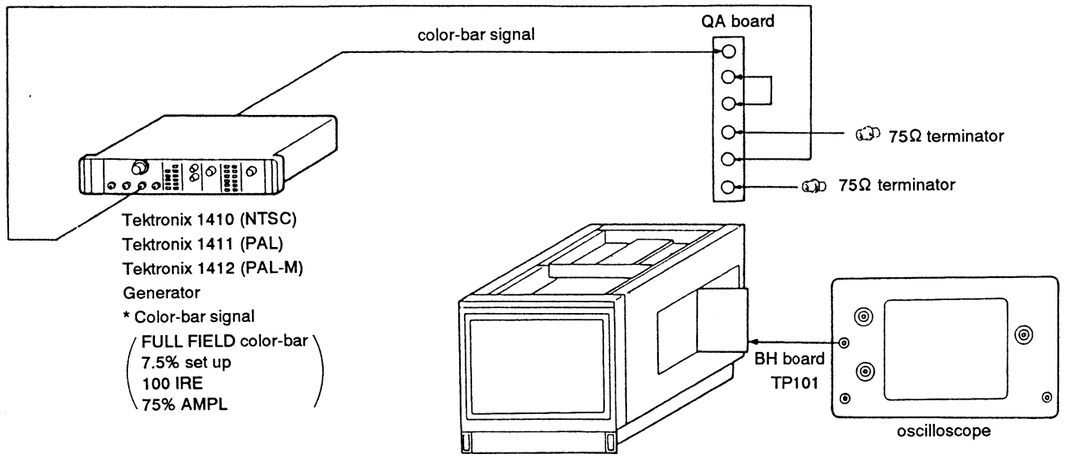
SECTION 3
ADJUSTMENT

BA3 BOARD ADJUSTMENTS

1. ANALOG VIDEO INPUT A, B CHANNEL LEVEL ADJUSTMENT



1. Input a color-bar signal to VIDEO terminal (QA board) of the set.
   - INPUT selector (FRONT PANEL) ····· A (⏥) ON
   - INT/EXT SYNC selector (FRONT PANEL) ····· EXT (⏥) ON
   - AUTO/MONO MODE selector (FRONT PANEL) ····· MONO (⏥) ON



Exa. BVM-1915

2. Connect an oscilloscope to TP101 of BH baord.
3. Adjust RV101 of BA3 board so that the Ⓓ (100 IRE level) coincides with Ⓑ (100% white level) as shown in Fig. 1-1.
4. Select the B ch INPUT.
   - INPUT selector (FRONT PANEL) ·····B (⏥) ON
   - AUTO/MONO MODE selector (FRONT PANEL) ····· MONO (⏥) ON
   - INPUT SELECT buttons (SUB CONTROL PANEL) ·····B (⏥) ON
5. Adjust RV201 of the BA3 board in a similar manner of step 3.

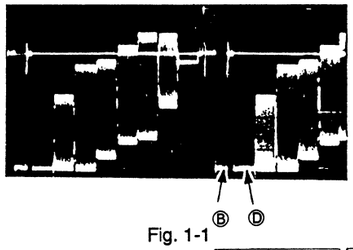
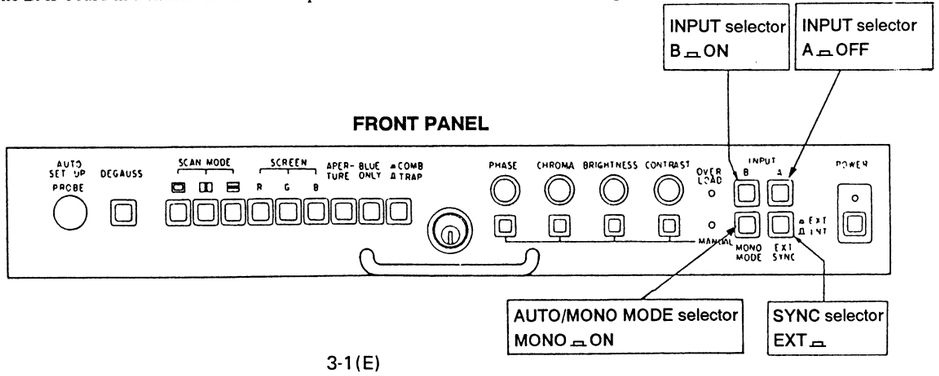
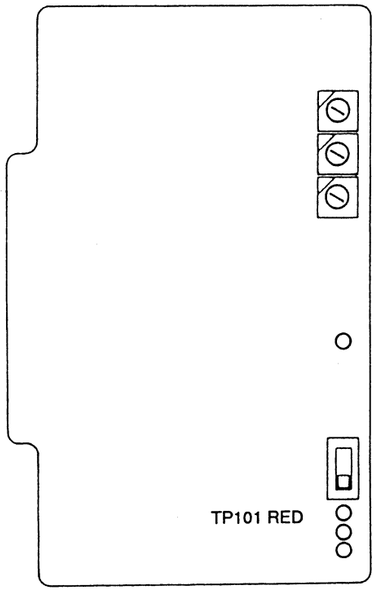


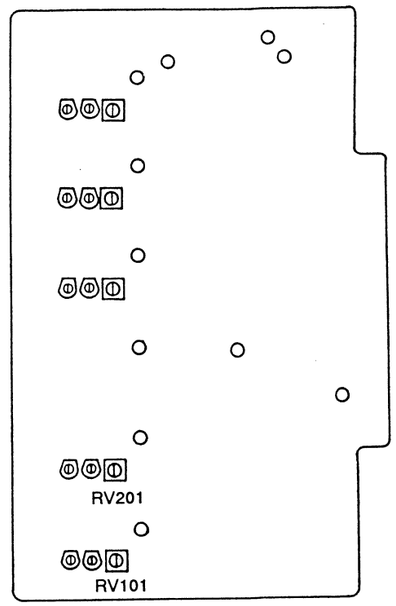
Fig. 1-1



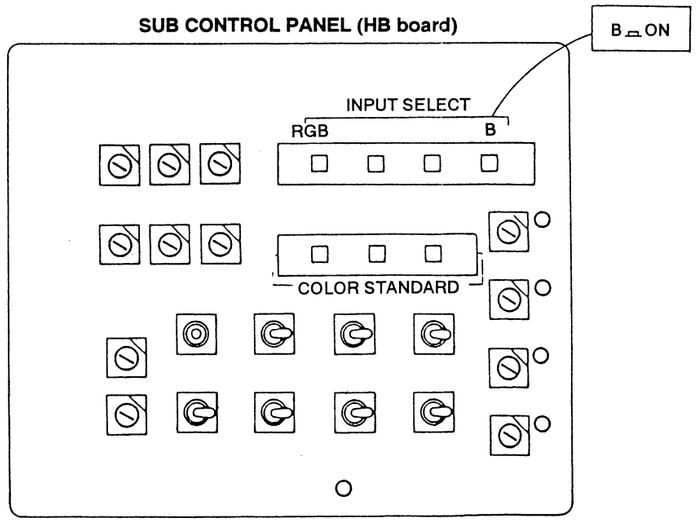
BH BOARD



BA3 BOARD

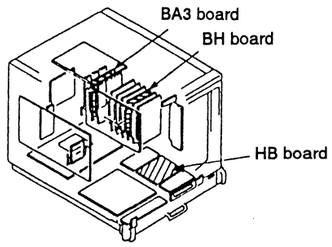


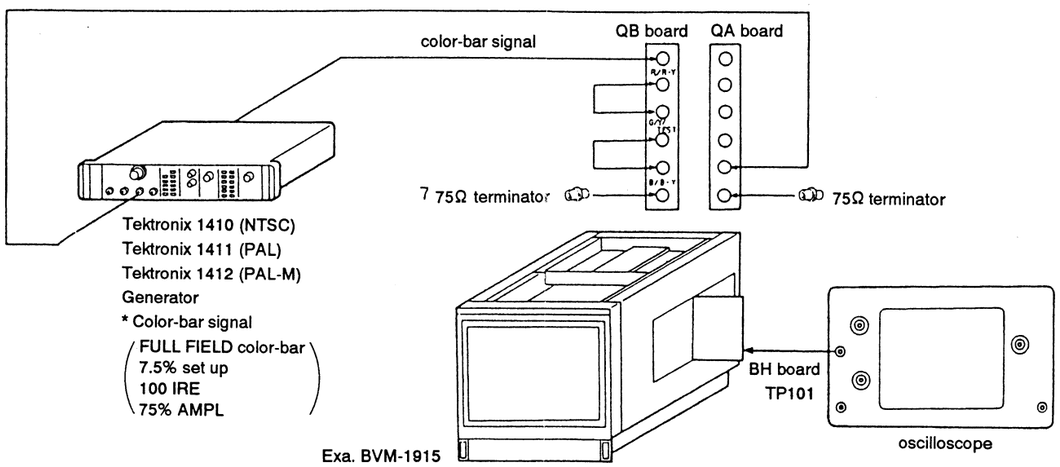
SUB CONTROL PANEL (HB board)



2. RGB VIDEO INPUT LEVEL ADJUSTMENT

1. Input color-bar signal to R.G.B. terminal (QB board) of this set, also EXT-COMP-SYNC signal to COMP VIDEO terminal (QA-board) .
   - INPUT selector (FRONT PANEL) ····· B (⎓)
   - INT/EXT SYNC selector (FRONT PANEL) ····· EXT (⎓)
   - INPUT SELECT buttons (SUB CONTROL PANEL) ····· RGB (⎓)





2. Connect an oscilloscope to TP101 of BH board.
3. Adjust RV401 of BA3 board so that the Ⓓ (100 IRE level) coincides with Ⓑ (100% white level) as shown in Fig. 2-1.
4. Connect an oscilloscope to TP201 of BH board.
5. Adjust RV501 of BA3 board so that the Ⓓ (100 IRE level) coincides with Ⓑ (100% white level) as shown in Fig. 2-1.
6. Connect an oscilloscope to TP101 of BH board.
7. Adjust RV601 of BA3 board so that the Ⓓ (100 IRE level) coincides with Ⓑ (100% white level) as shown in Fig. 2-1.

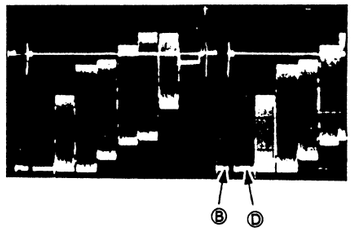
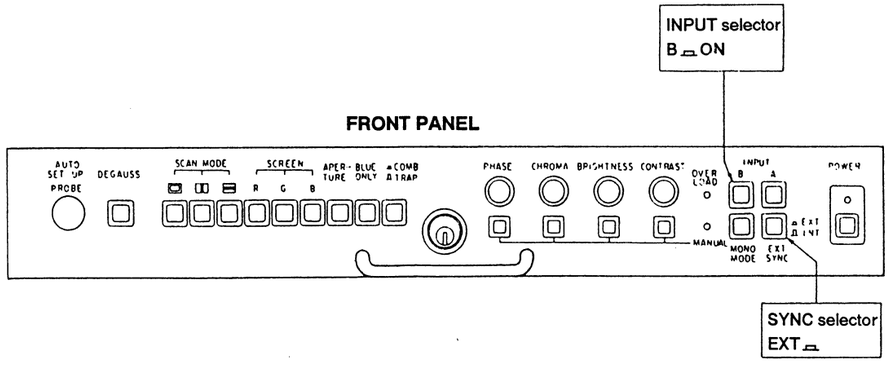
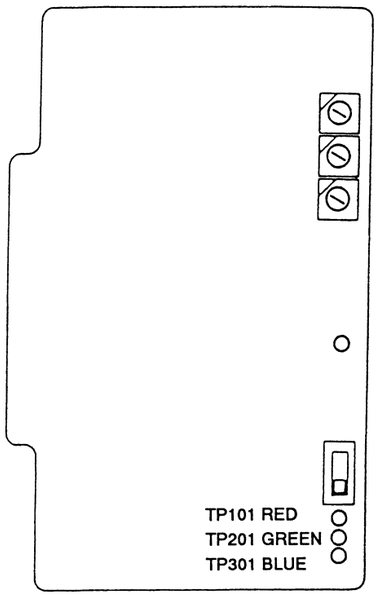


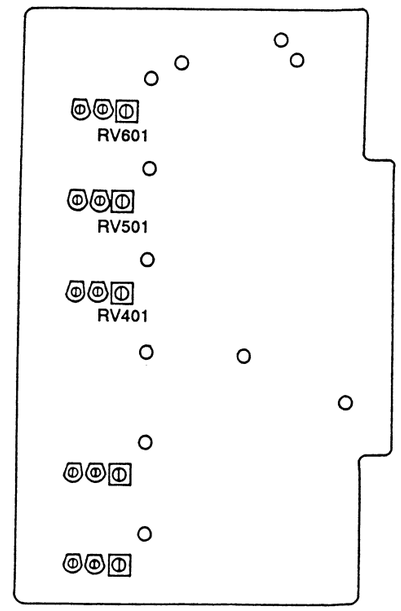
Fig. 2-1

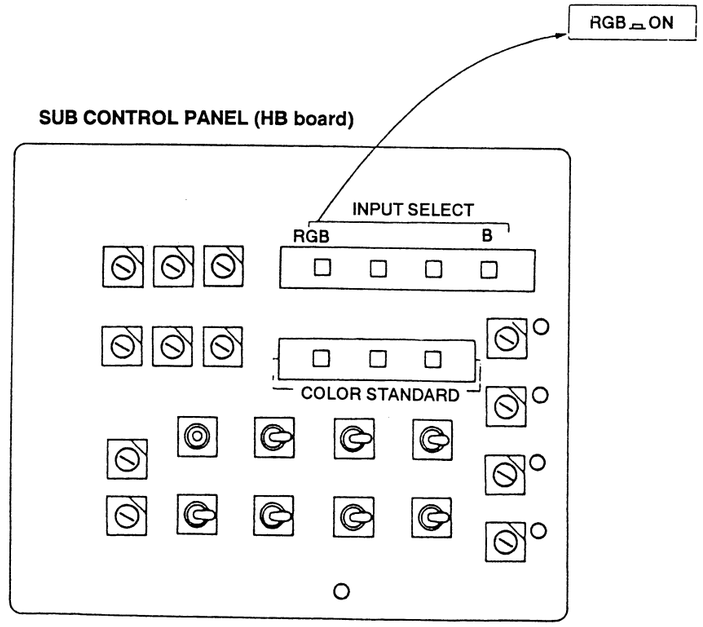


BH BOARD



BA3 BOARD





3. INPUT CIRCUIT FREQUENCY CHARACTERISTIC ADJUSTMENT

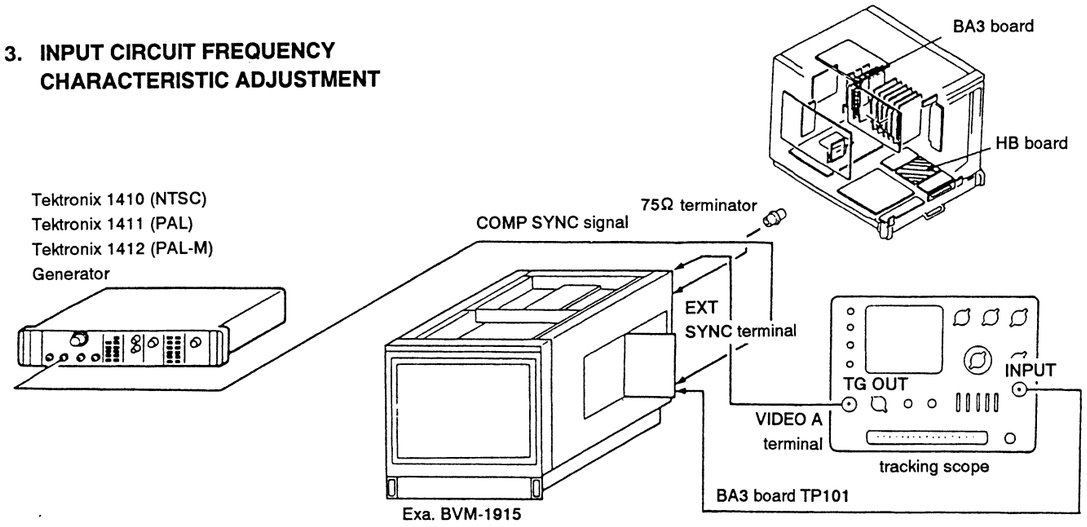


Fig. 3-1

1. Complete the connection as shown in Fig. 3-1.
   - INPUT selector (FRONT PANEL) ····· A (⎓)
   - INT/EXT SYNC selector (FRONT PANEL) ····· EXT (⎓)
   - CONTRAST control (FRONT PANEL) ····· Minimum
   - BRIGHTNESS control (FRONT PANEL) ····· Minimum
2. Adjust output waveform peak to 12MHz with CV102 of the BA3 board as shown in Fig. 3-2.

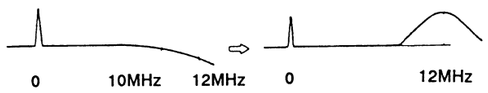


Fig. 3-2

3. Adjust CV101 of the BA3 board so that the output waveform becomes flat in a range of 0 to 10MHz as shwon in Fig. 3-3.

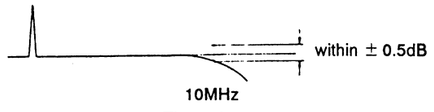
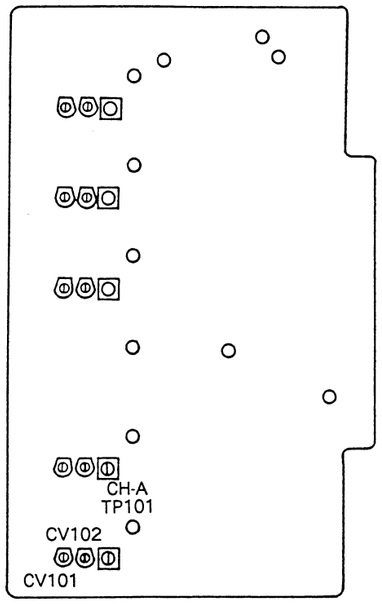
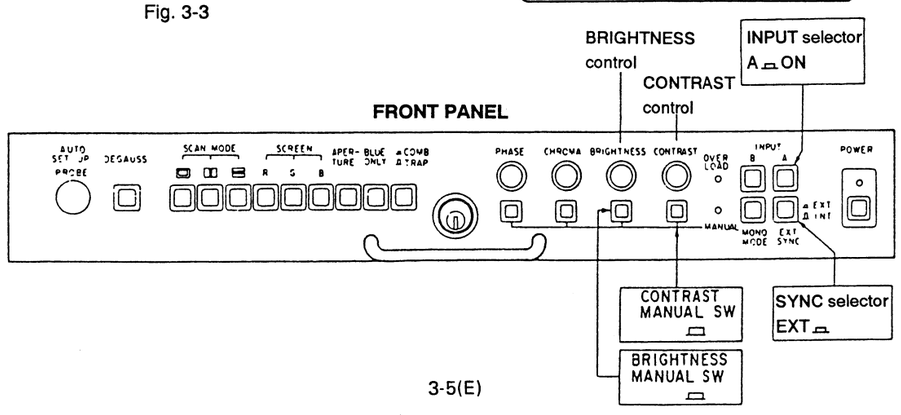


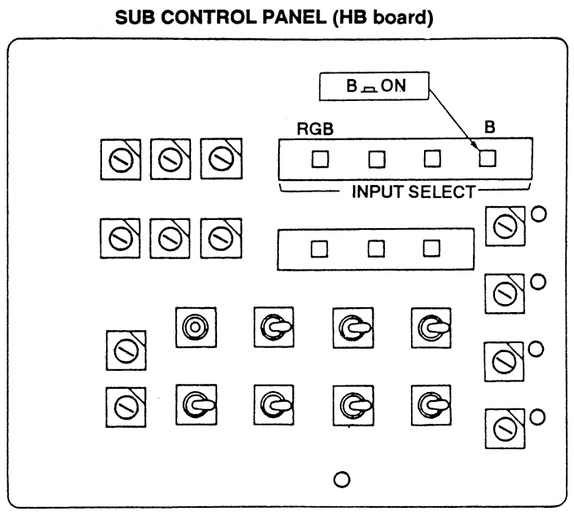
Fig. 3-3

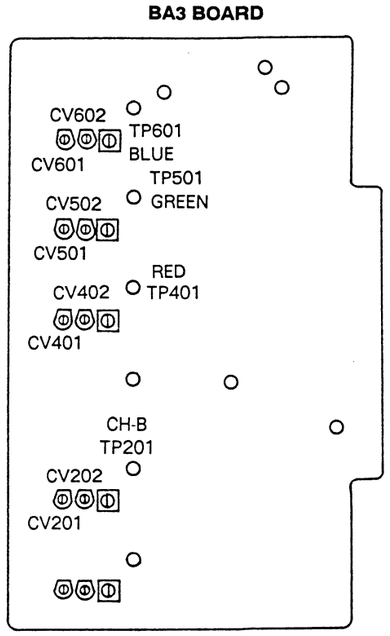


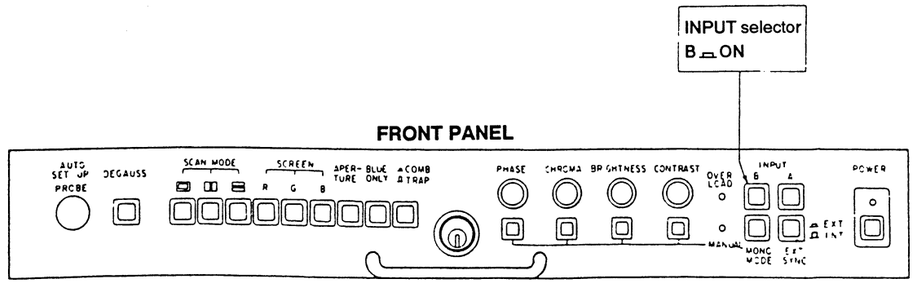


4. In the same way, perform the adjustment for B ch. under the following coditions.

INPUT	INPUT selector (FRONT PANEL)	INPUT SELECT buttons (SUB CONTROL PANEL)	TP (BA3 board)	CV (BA3 board)
B	B	B	TP201	CV201, CV202
R/R-Y	B	RGB	TP401	CV401, CV402
G/Y/TEST	B	RGB	TP501	CV501, CV502
B/B-Y	B	RGB	TP601	CV601, CV602







4. BV1 BOARD ADJUSTMENT

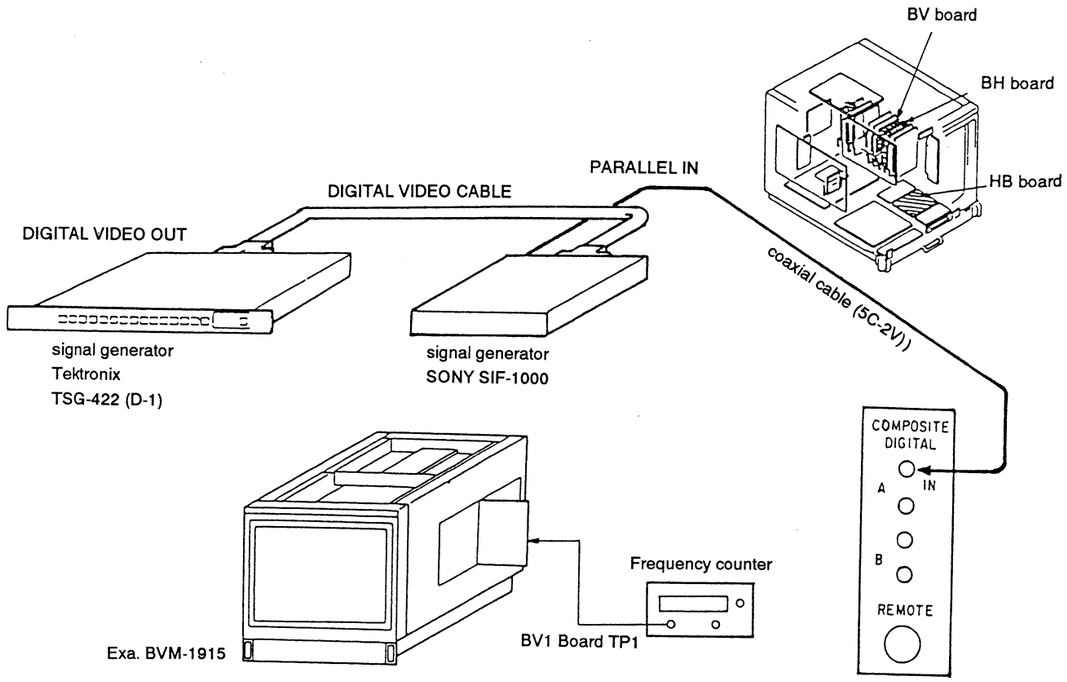
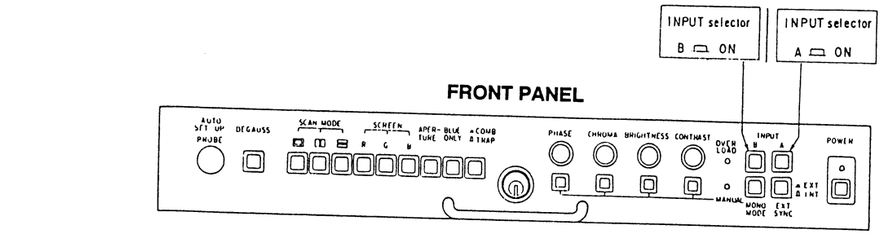
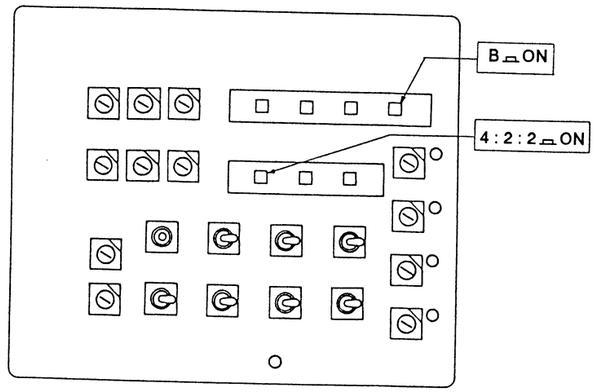


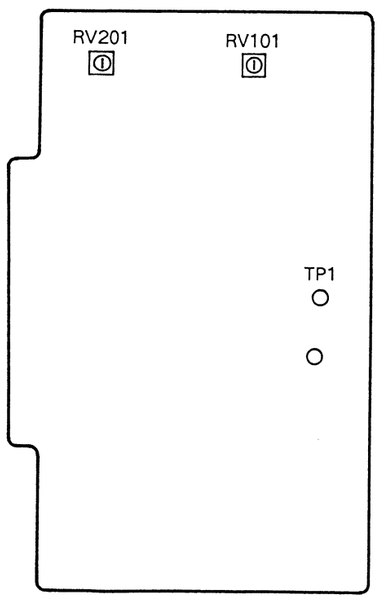
Fig. 4-1

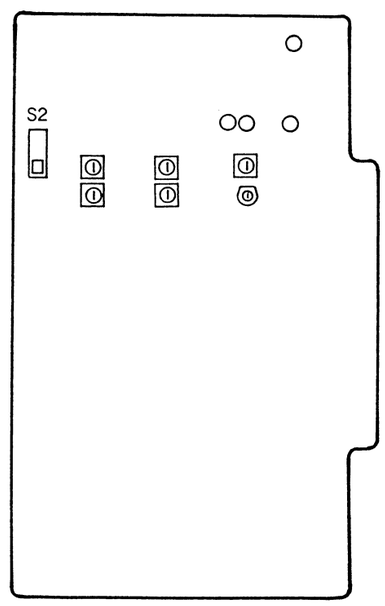
27 MHz CLOCK Adjustment

1. Disconnect the signal connected to digital input terminal.
   - INPUT selector (FRONT PANEL) ····· A
   - COLOR STANDARD SELECTOR
     (SUB CONTROL PANEL) ····· 4:2:2 (SECAM)
   - COLOR STANDARD SELECTOR
     (BV2 BOARD S2) ····· LOWER (SECAM)
2. Connect a Frequency counter to TP1 on the BV1 board.
3. Adjust RV101 on the BV1 board for 27 MHz.
4. Select input to Bch.
   Input selector (front panel) ····· B
   Input selector (sub-control panel) ····· B
5. Adjust RV201 on the BV1 board for 27 MHz.

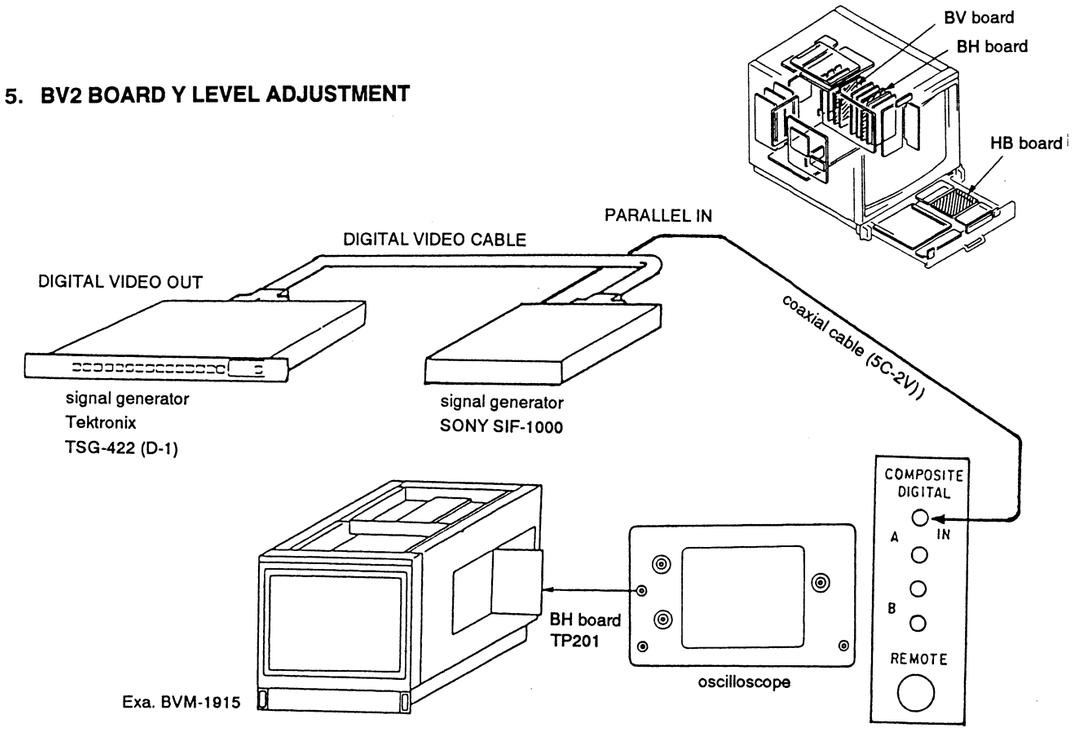








5. BV2 BOARD Y LEVEL ADJUSTMENT



1. Receive color-bar signal (100/0/100) .
   - COLOR STANDARD SELECTOR
     (SUB CONTROL PANEL)
     .....4:2:2 (SECAM)
   - COLOR STANDARD SELECTOR (BV2 BOARD S2)
     .....LOWER (SECAM)
2. Connect an oscilloscope to TP201 on the BH board.
3. Adjust with RV301 on the BV2 board so that the levels of A and B become equivalent as shown in Fig. 5-1.

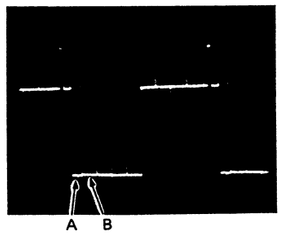
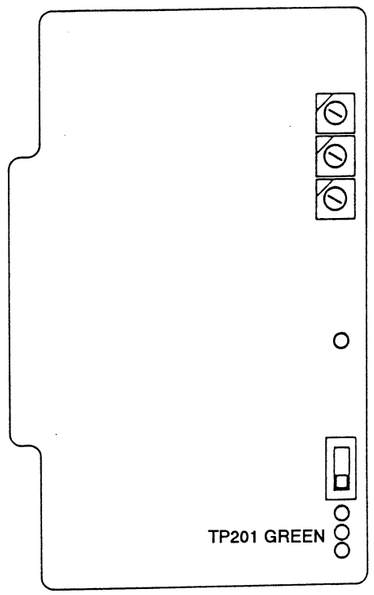
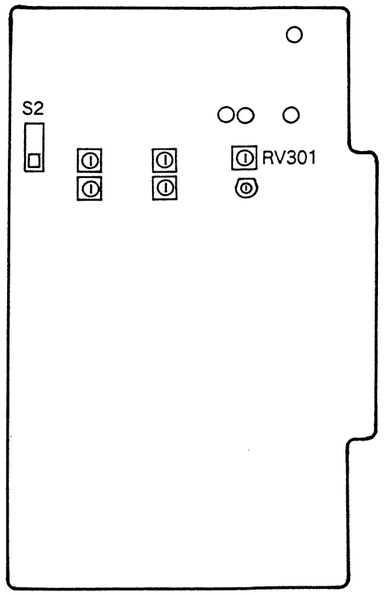


Fig. 5-1.

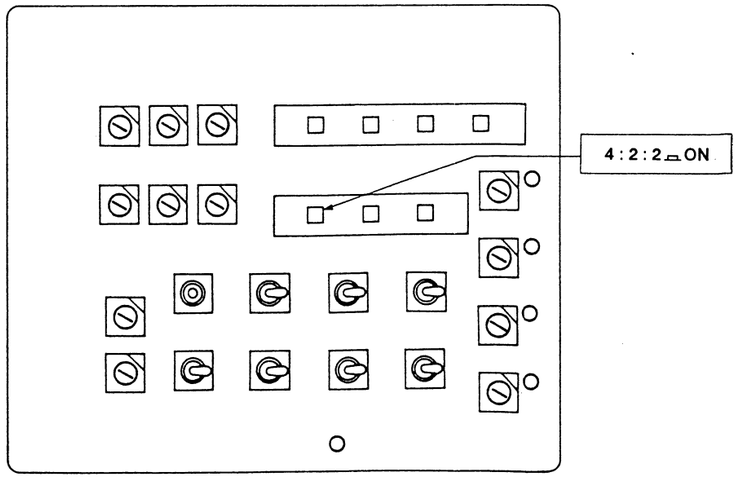
BH BOARD



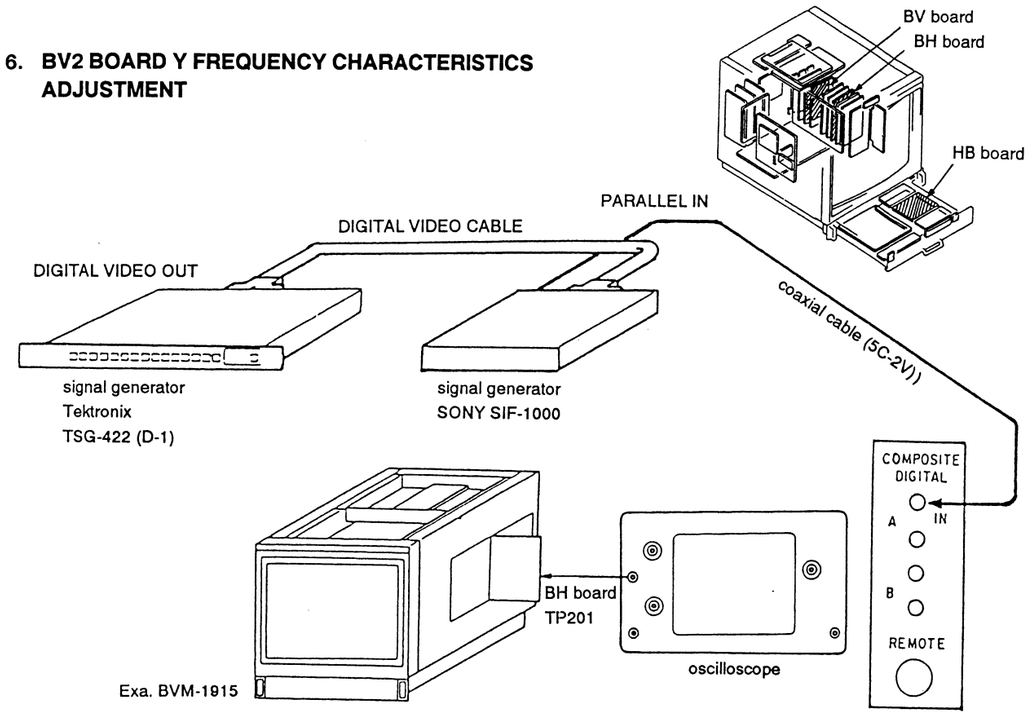
BV2 BOARD



HB BOARD



6. BV2 BOARD Y FREQUENCY CHARACTERISTICS ADJUSTMENT



1. Receive sweep signal.
   - COLOR STANDARD SELECTOR (SUB CONTROL PANEL)
     .....4:2:2 (SECAM)
   - COLOR STANDARD SELECTOR (BV2 BOARD S2)
     .....LOWER (SECAM)
2. Connect an oscilloscope to TP201 on the BH board.
3. Adjust with CV301 on the BV2 board so that the output waveform of 0 to 5 MHz range becomes flat as shown in Fig. 6-1.

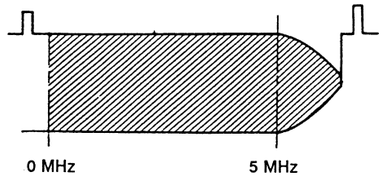
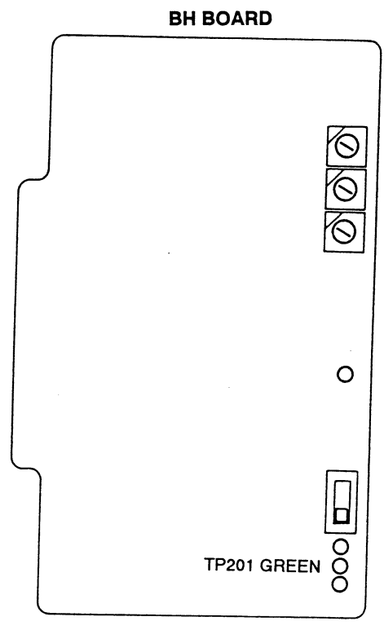
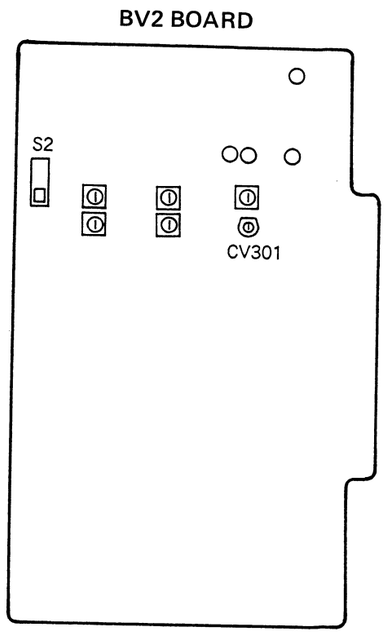
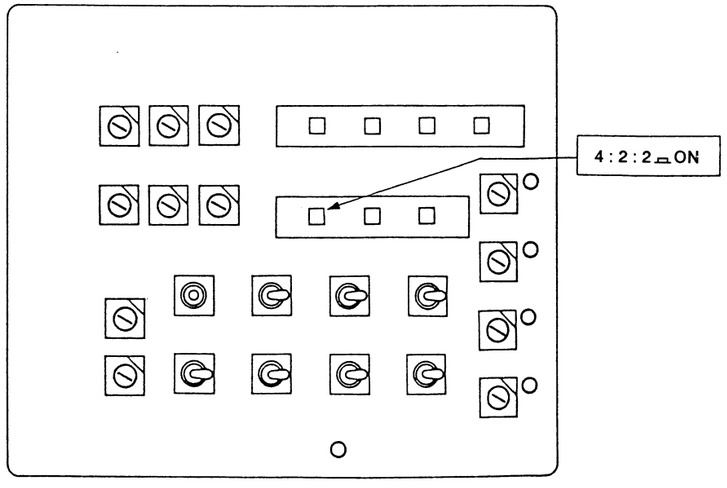


Fig. 6-1.

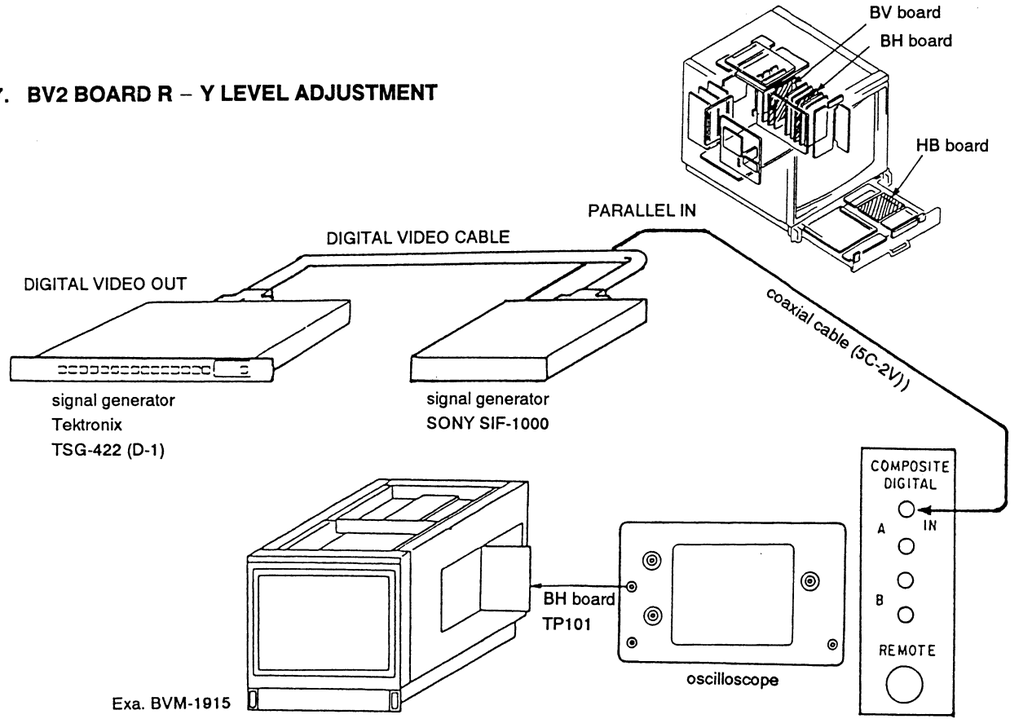




HB BOARD



7. BV2 BOARD R – Y LEVEL ADJUSTMENT



1. Receive color-bar signal (100/0/100) .
   - COLOR STANDARD SELECTOR
     (SUB CONTROL PANEL)
     .....4:2:2 (SECAM)
   - COLOR STANDARD SELECTOR (BV2 BOARD S2)
     .....LOWER (SECAM)
2. Connect an oscilloscope to TP101 on the BH board.
3. Adjust with RV101 on the BV2 board so that it becomes as shown in Fig. 7-1.

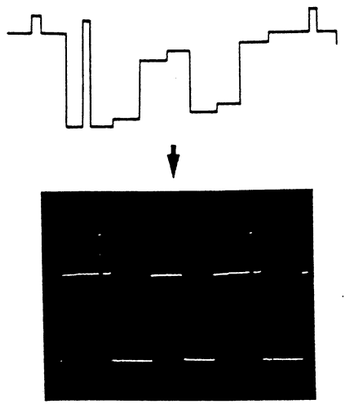
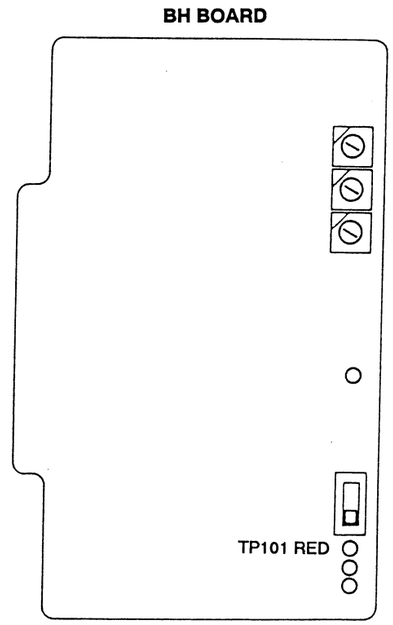
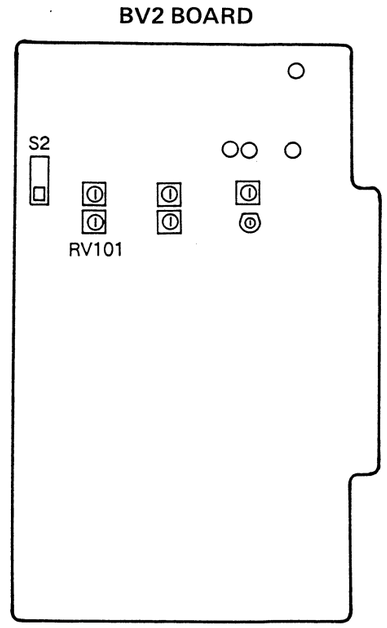
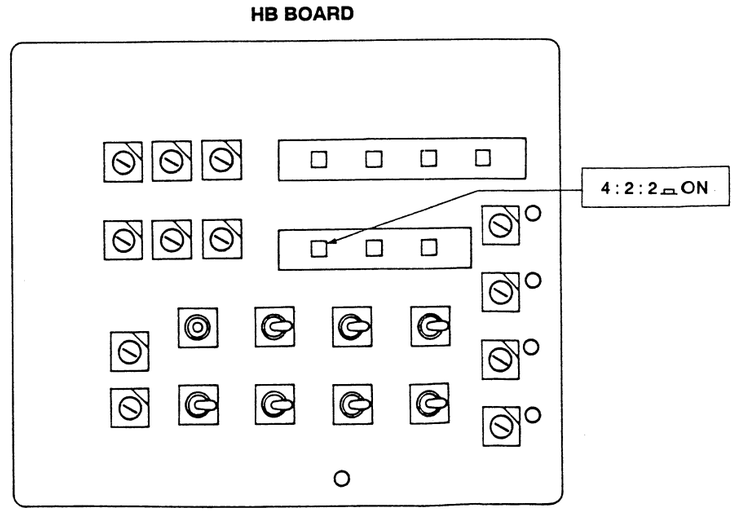


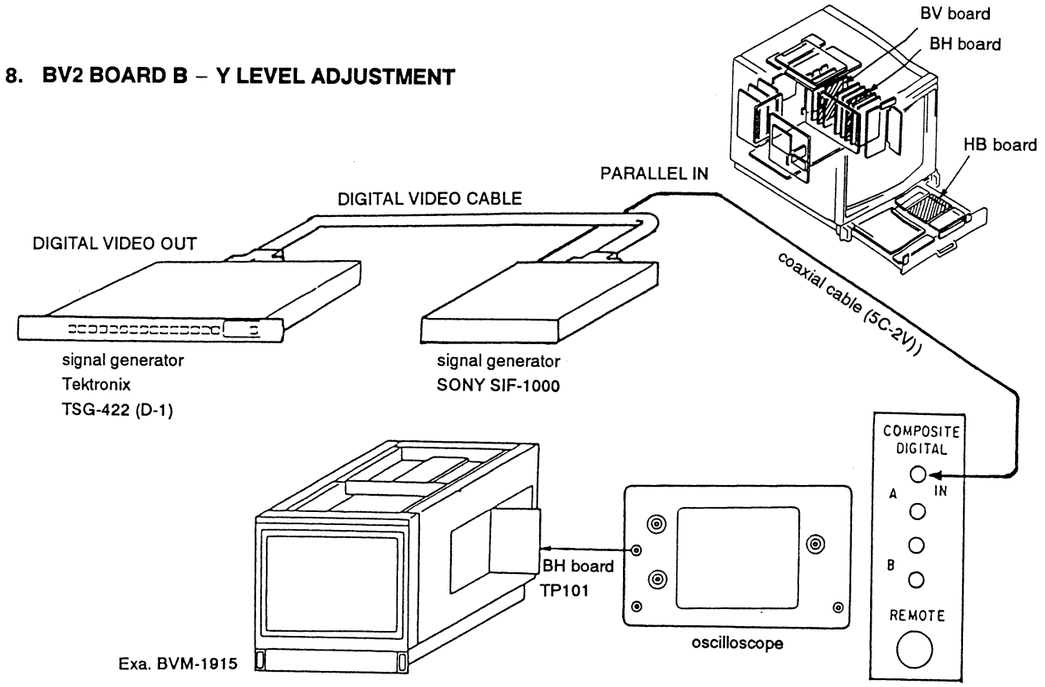
Fig. 7-1.







8. BV2 BOARD B – Y LEVEL ADJUSTMENT



1. Receive color-bar signal.
   - COLOR STANDARD SELECTOR
     (SUB CONTROL PANEL)
     .....4:2:2 (SECAM)
   - COLOR STANDARD SELECTOR
     (BV2 BOARD S2)
     .....LOWER (SECAM)
2. Connect an oscilloscope to TP301 on the BH board.
3. Adjust with RV201 on the BV2 board so that it becomes as shown in Fig. 8-1.

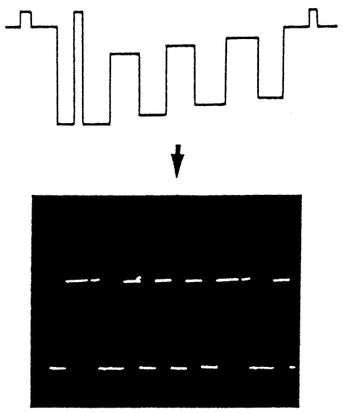
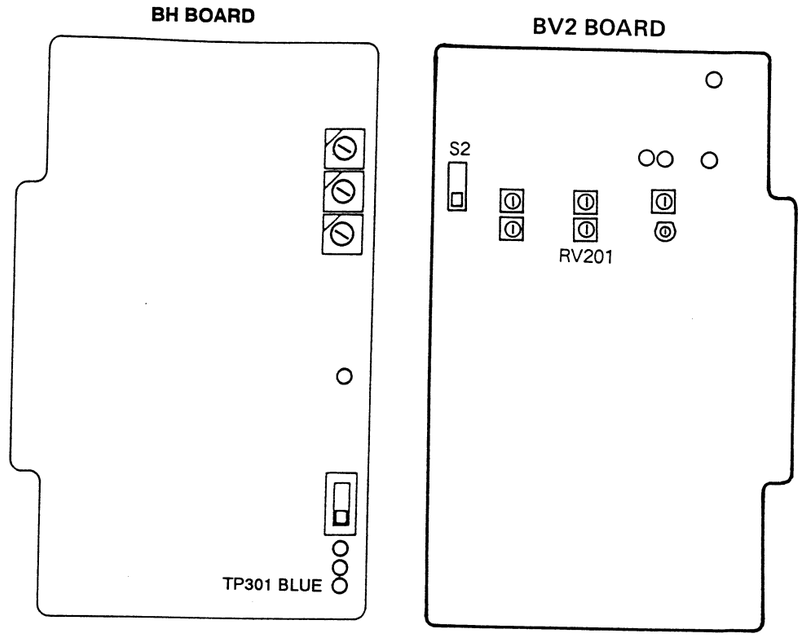
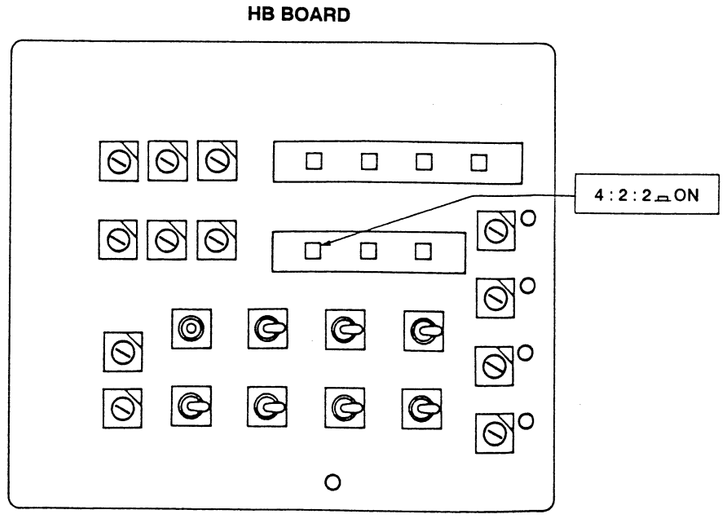
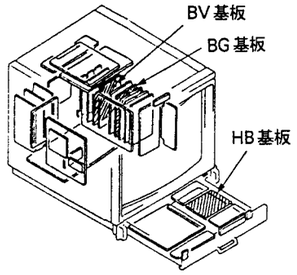


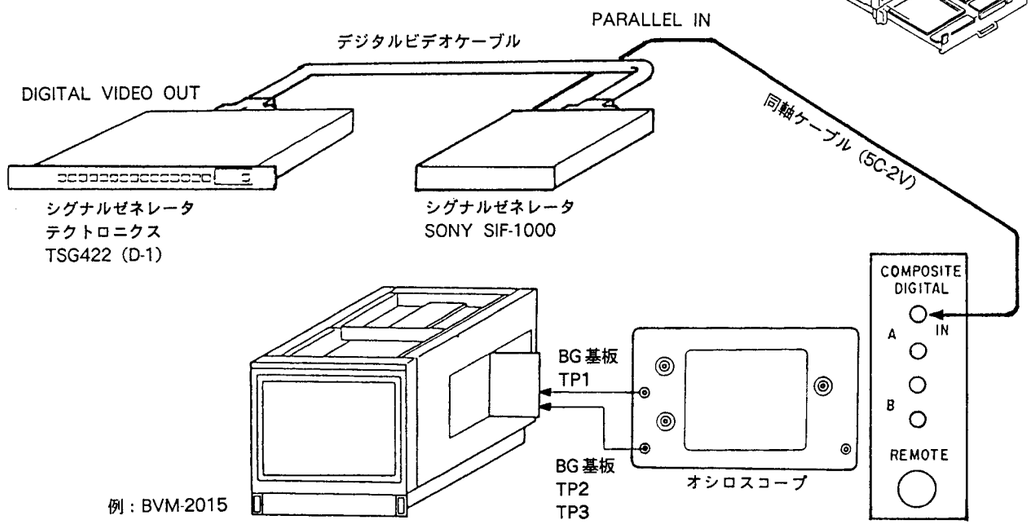
Fig. 8-1.





9. BV2基板 Y－(R－Y)〔Y－(B－Y)〕DELAY TIME 調整





1. カラーバー信号を受像する。
   - COLOR STANDARD buttons (サブコントロールパネル)
     …… 4：2：2 (SECAM)
   - COLOR STANDARD切換スイッチ (BV2基板S2)
     …… 下側 (SECAM)
2. オシロスコープのCH1のプローブをBG基板TP1, CH2のプローブをBG基板TP2 (TP3) に接続する。
3. 図9-1のようにセンタースケールに対してCH1の波形がa＝a' となるようにCH2の波形がb＝b' となるようにオシロスコープの各々のPOSITIONを調整する。
4. 図9-1のa－a', b－b' 部分を拡大する。
5. CH1の波形とCH2の波形の交点がセンタースケール上になるようにBV2基板RV102,(RV202) を調整する。

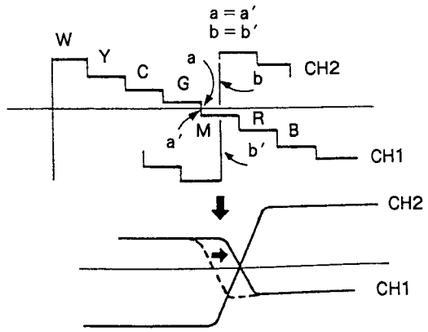
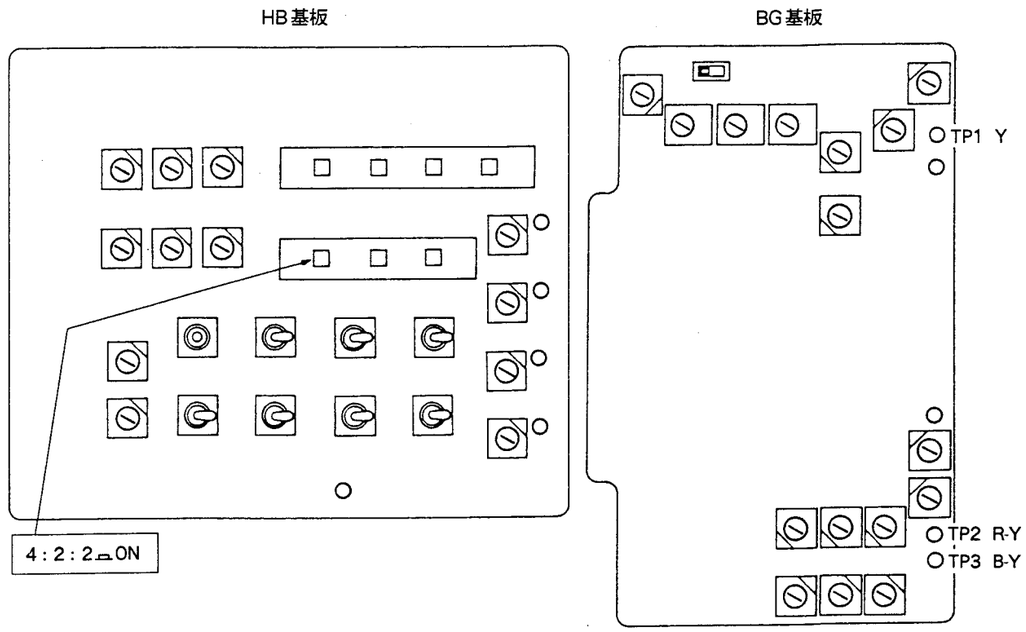
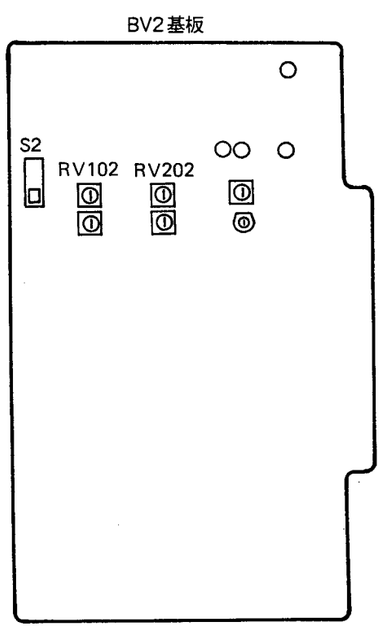


図9-1





第 4 章
ダイヤグラム

SECTION 4
DIAGRAMS

4-1. 回路図, プリント図

⚠および ▒▒ 印の部品は，安全性を維持するために，重要な部品です。従って交換時は，必ず指定の部品を使用して下さい。

- ケミコンを除くコンデンサで耐圧50V以下のものは，その耐圧を省略。単位はすべて μF（p は pF）
- 定格電力表示のない抵抗は部品表参照。
  単位はすべてΩ。
- [ ]は，パネル表示名称および調整名称。
- 半固定抵抗および可変抵抗器の特性カーブ（B）は省略。
- 波形はデジタルカラーバー信号を入力した時の参考値。
- ⏚V ：B＋ライン
- ⏚V ：B－ライン。
  （実測値は異なる場合があります。）
- 丸数字は波形表の番号。

－部品特性略称表－

- 固定抵抗
  RN ：金属皮膜
  RC ：ソリッド
  FPRD：不燃性カーボン
  FUSE：不燃性ヒューズ
  RS ：不燃性酸化金属皮膜
  RB ：不燃性セメント
  RW ：不燃性巻線
  ※ ：調整抵抗

- マイクロインダクタ
  LF-8L：マイクロインダクタ

- コンデンサ
  TA ：タンタル
  PS ：スチロール
  PP ：ポリプロピレン
  PT ：マイラ
  MPS ：メタライズドポリエステル
  MPP ：メタライズドポリプロピレン
  ALB ：バイポーラ
  ALT ：高温用
  ALR ：ハイリップル

4-1. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note :

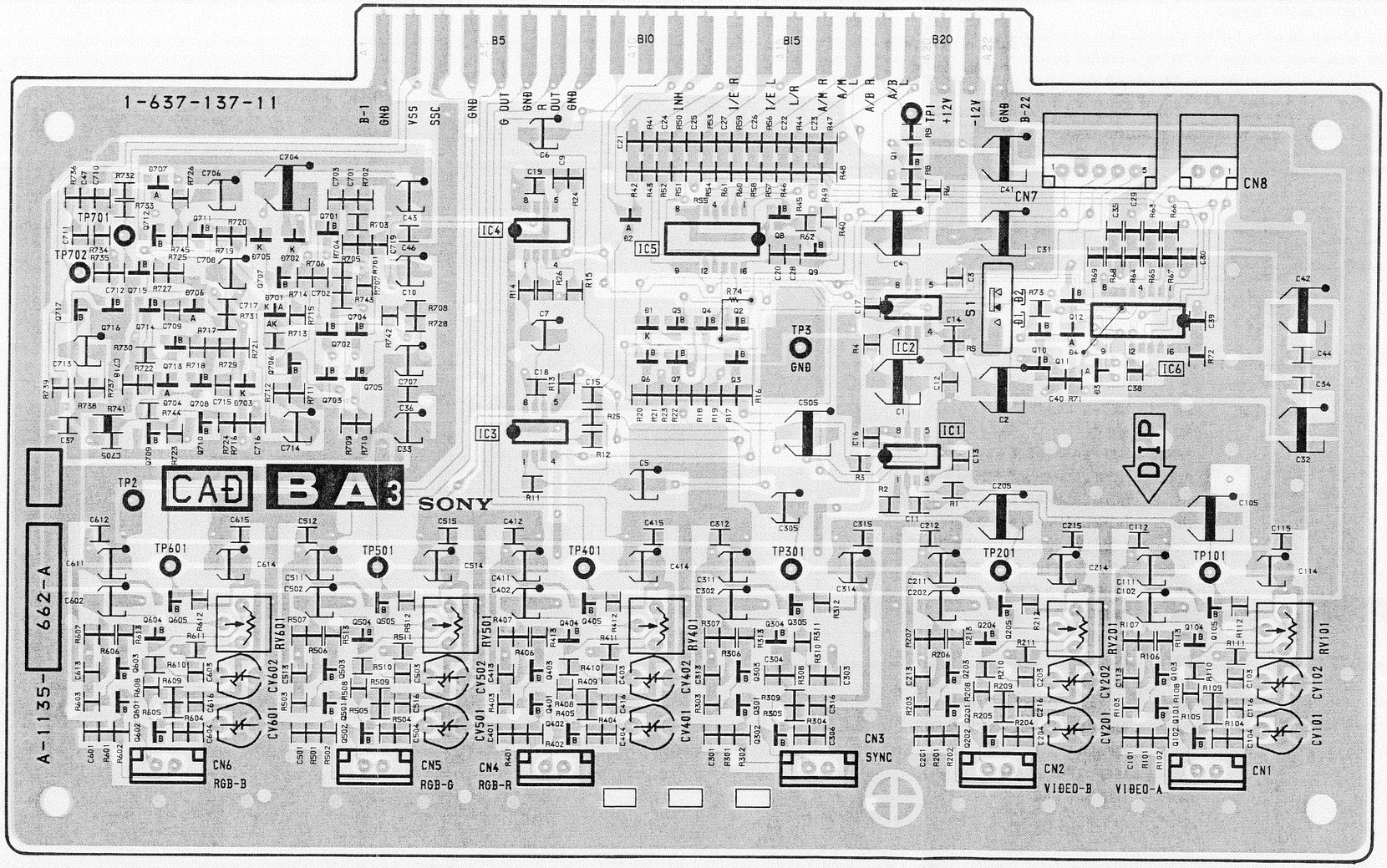
- All capacitors are in μF unless otherwise noted.
  p : μμF
  50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  kΩ＝1000Ω, MΩ＝1000kΩ
- See the electrical parts list for the indication of resistance, which does not have one for rating electrical power.
- [ ] : panel designation or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Waveforms are taken with a digital color-bar signal input.
  no mark : parrallel data
  ( ) : serial data
- Voltages variations may be noted due to normal production tolerances.
- Circled numbers are waveform references.
- ⏚V : B＋ bus.
- ⏚V : B－ bus.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ※	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

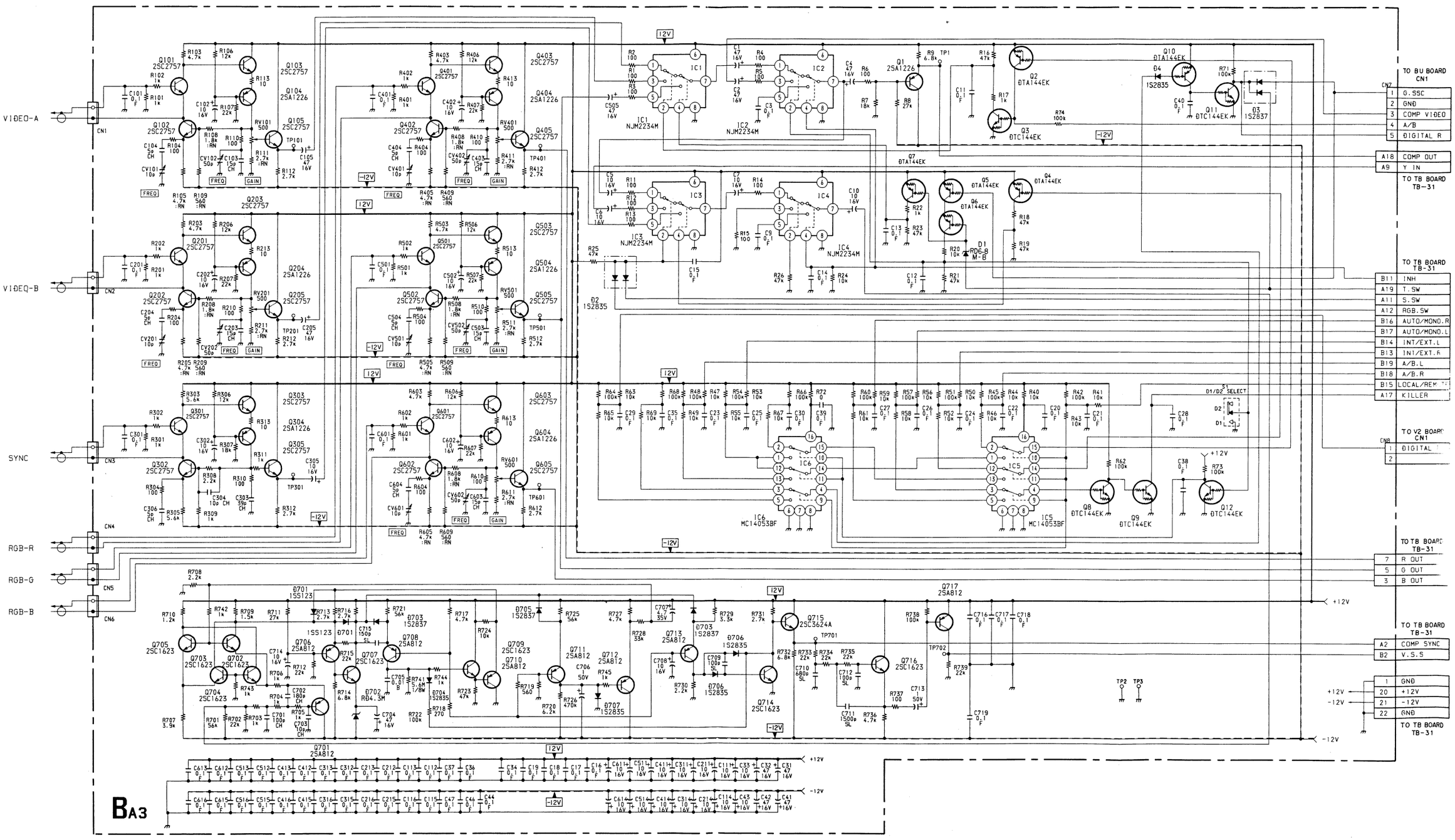
BA3 BOARD (HOOK UP, INPUT/SYNC SELECT & SYNC SEP)

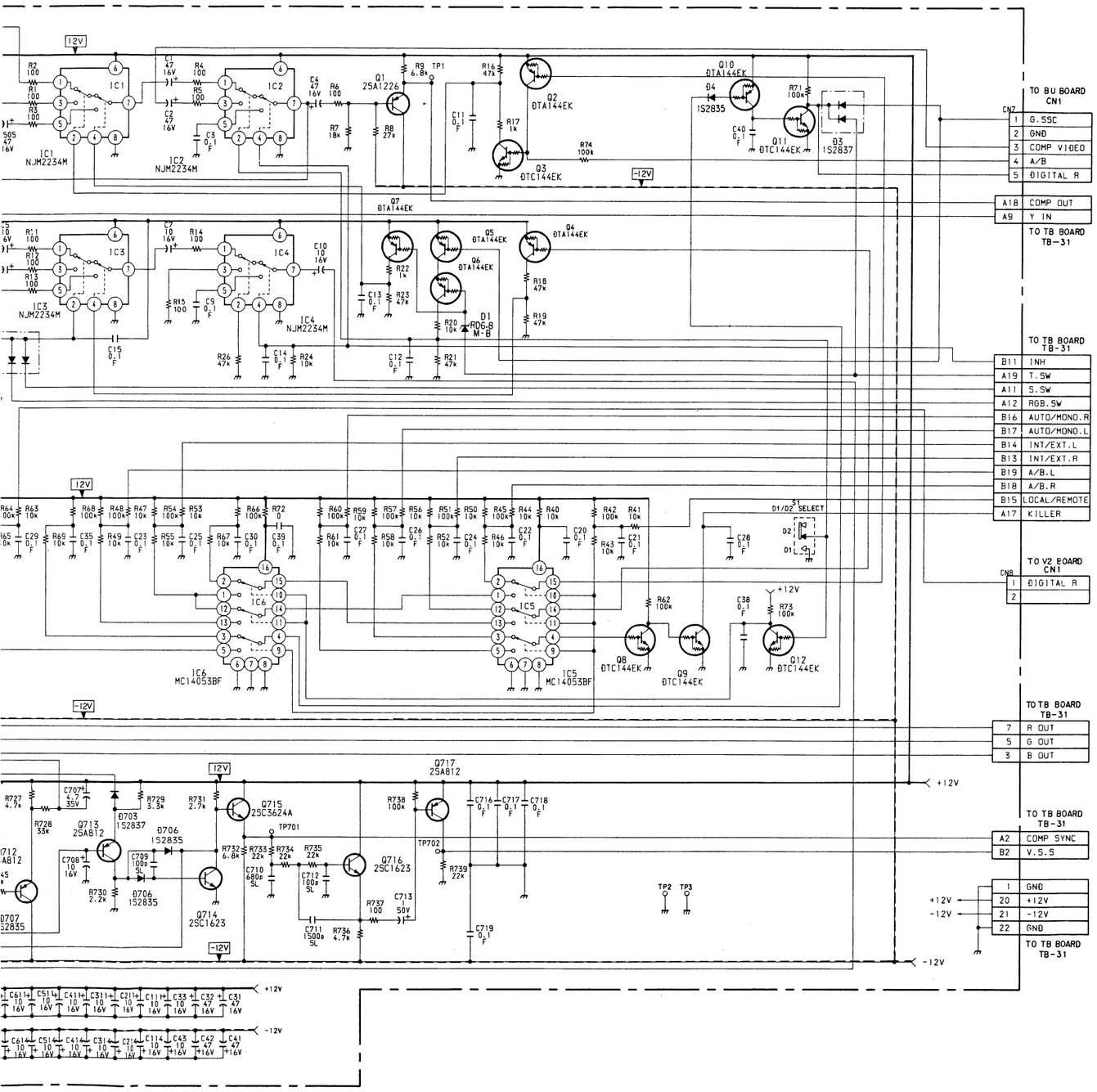
IC	4 3 5 2 1 6	IC
Q	712 711 715 701 707 702,704 706 703,705 717 716 714 708 713 710 709 603 605 604 601,602 505 503 504 501 502 405 403 404 401 402 8 9 1 5 4 2 6 7 3 305 303 304 301 302 10 12 11 205 203 204 201 202 103 104 105 101 102	Q
D	707 706 705 702 704 703 701 2 1 4 3	D
ADJ	RV601 CV602 CV601 RV501 CV502 CV501 RV401 CV402 CV401 RV201 CV202 CV201 RV101 CV102 CV101	ADJ
TP	702 701 2 601 501 401 3 301 1 201 101	TP



• : Conductor side pattern
• : Component side pattern

BA3 BOARD (HOOK UP, INPUT/SYNC SELECT & SYNC SEP)



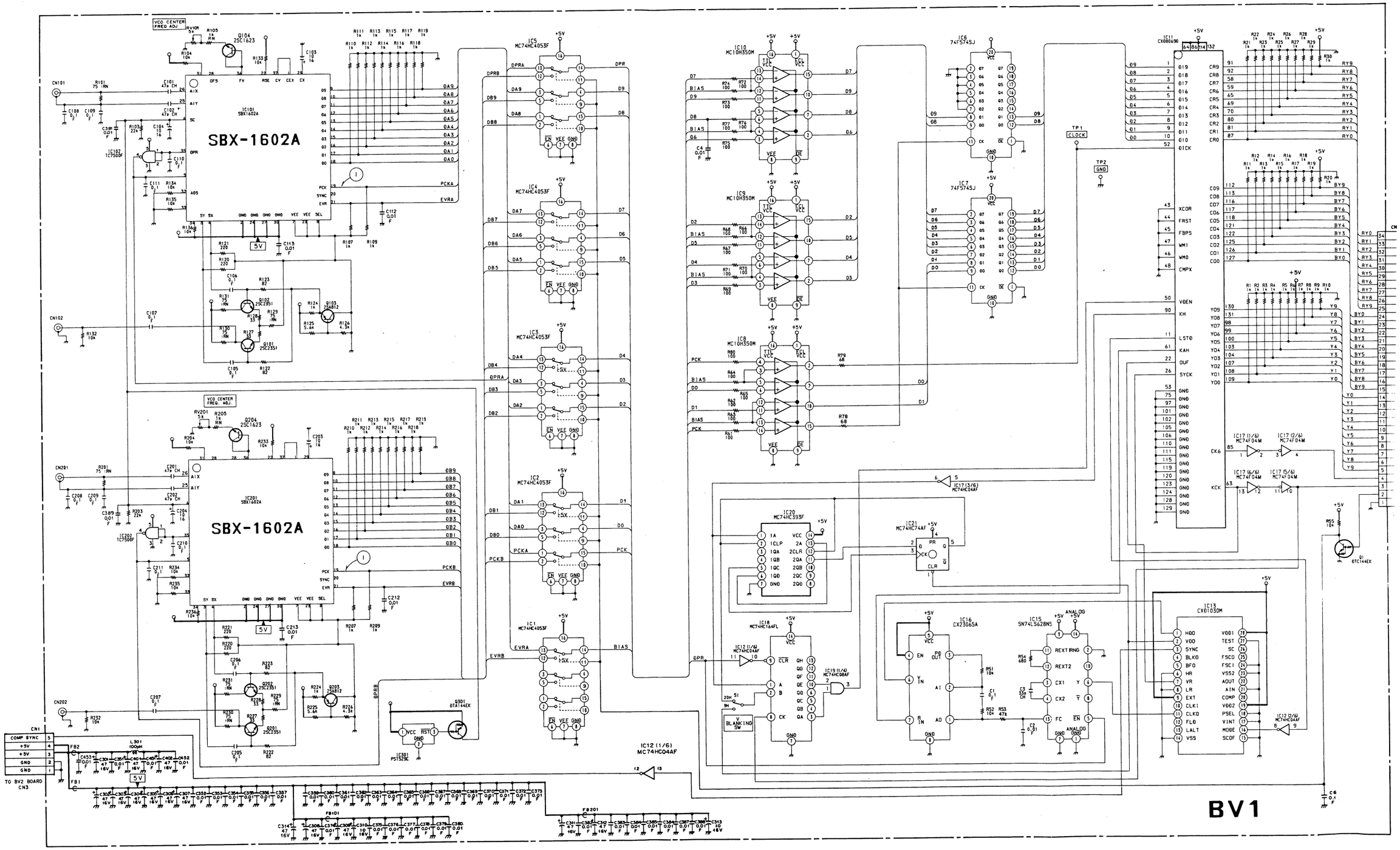


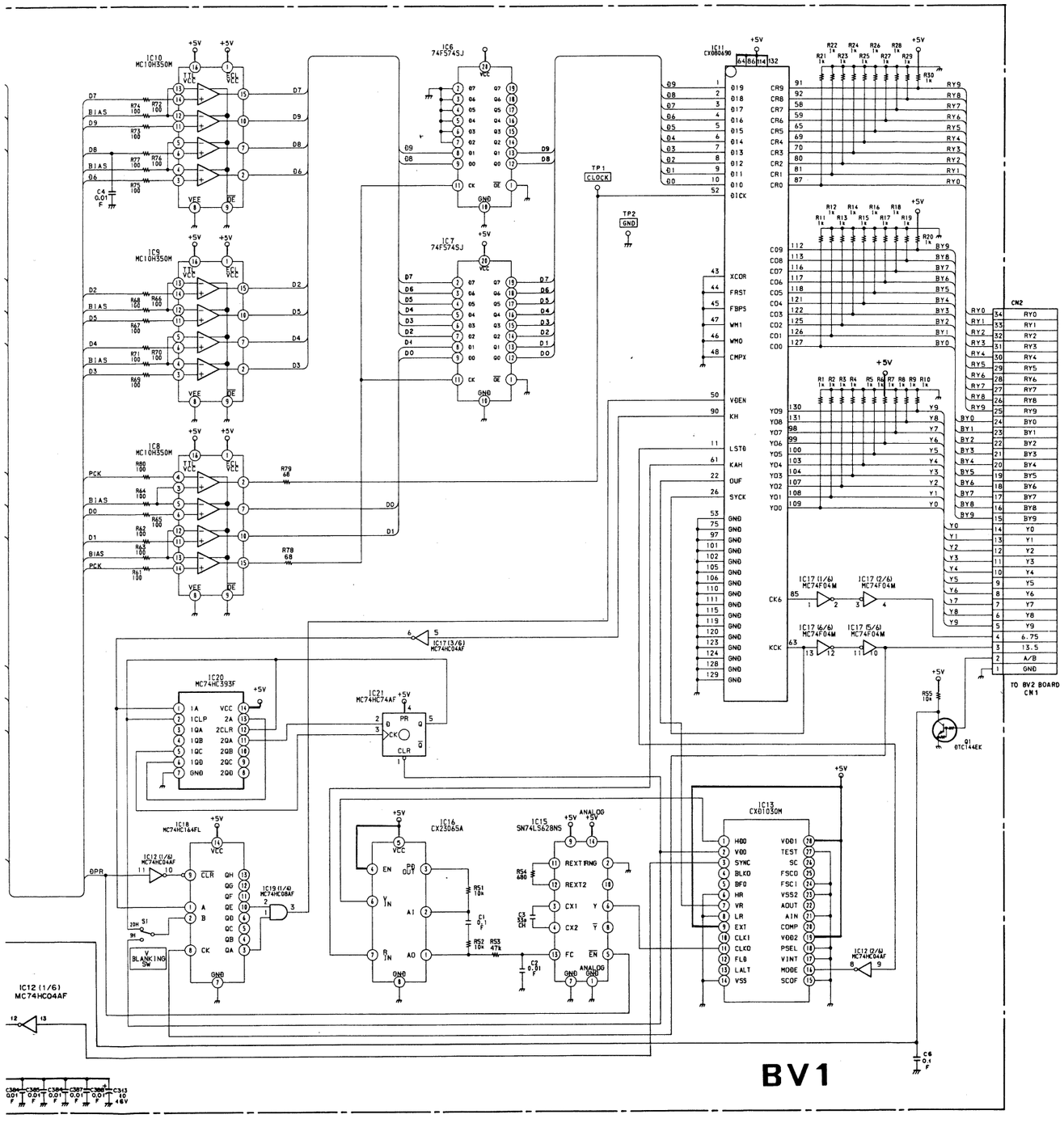
BA3 BOARD

IC 1	NJM2234M	INPUT SELECT CONTROL
2	NJM2234M	INPUT SELECT CONTROL
3	NJM2234M	SYNC SELECT CONTROL
4	NJM2234M	SYNC SELECT CONTROL
5	MC14053BF	REMOTE/LOCAL SW
6	MC14053BF	D-2 FUNCTION SW
Q 1	2SA1226	BUFFER
2	DTA144EK	A/B CONTROL
3	DTC144EK	A/B CONTROL
4	DTA144EK	INT/EXT CONTROL
5	DTA144EK	INPUT SELECT CONTROL
6	DTA144EK	INPUT SELECT CONTROL
7	DTA144EK	INPUT SELECT CONTROL
8	DTC144EK	KILLER SW
9	DTC144EK	KILLER SW
10	DTA144EK	REMOTE DIGITAL
11	DTC144EK	REMOTE DIGITAL
12	DTC144EK	D-2 FUNCTION CONTROL
101	2SC2757	VIDEO A AMP
102	2SC2757	VIDEO A AMP
103	2SC2757	VIDEO A AMP
104	2SA1226	VIDEO A AMP
105	2SC2757	VIDEO A AMP
201	2SC2757	VIDEO B AMP
202	2SC2757	VIDEO B AMP
203	2SC2757	VIDEO B AMP
204	2SA1226	VIDEO B AMP
205	2SC2757	VIDEO B AMP
301	2SC2757	EXT SYNC AMP
302	2SC2757	EXT SYNC AMP
303	2SC2757	EXT SYNC AMP
304	2SA1226	EXT SYNC AMP
305	2SC2757	EXT SYNC AMP
401	2SC2757	R-Y/R AMP
402	2SC2757	R-Y/R AMP
403	2SC2757	R-Y/R AMP
404	2SA1226	R-Y/R AMP
405	2SC2757	R-Y/R AMP
501	2SC2757	TEST/Y/G AMP
502	2SC2757	TEST/Y/G AMP
503	2SC2757	TEST/Y/G AMP
504	2SA1226	TEST/Y/G AMP
505	2SC2757	TEST/Y/G AMP
601	2SC2757	B-Y/B AMP
602	2SC2757	B-Y/B AMP
603	2SC2757	B-Y/B AMP
604	2SA1226	B-Y/B AMP
605	2SC2757	B-Y/B AMP
701	2SA1162	SYNC AGC
702	2SC1623	SYNC AGC
703	2SC1623	SYNC AGC
704	2SC1623	SYNC AGC
705	2SC1623	SYNC AGC
706	2SA1162	SYNC AGC
707	2SC1623	SYNC AGC
708	2SA1162	SYNC AGC
709	2SC1623	SYNC AGC
710	2SA1162	SYNC AGC
711	2SA1162	SYNC AGC
712	2SA1162	SYNC AGC
713	2SA1162	COMP SYNC SEP
714	2SC1623	COMP SYNC SEP
715	2SC3624A	COMP SYNC SEP
716	2SC1623	V SYNC SEP
717	2SA1162	V SYNC SEP
D 1	RD6.8M-B	INPUT SELECT CONTROL
2	1S2835	INPUT SELECT CONTROL
3	1S2837	REMOTE DIGITAL CONTROL
4	1S2835	REMOTE DIGITAL CONTROL
701	1SS123	SYNC AGC
702	RD4.3M-B2	-7.5V REG
703	1S2837	SYNC AGC
704	1S2835	SYNC AGC
705	1S2837	SYNC AGC
706	1S2835	COMP SYNC SEP
707	1S2835	SYNC AGC

BV1 BV1

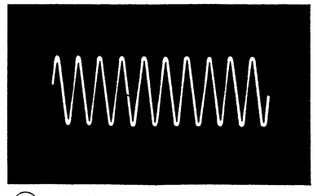
BV1 BOARD (S/P CONVERTER, CABLE DRIVER, ECL/TTL CONV, D-1 DECODER, COMP SYNC GEN)





BV1 BOARD

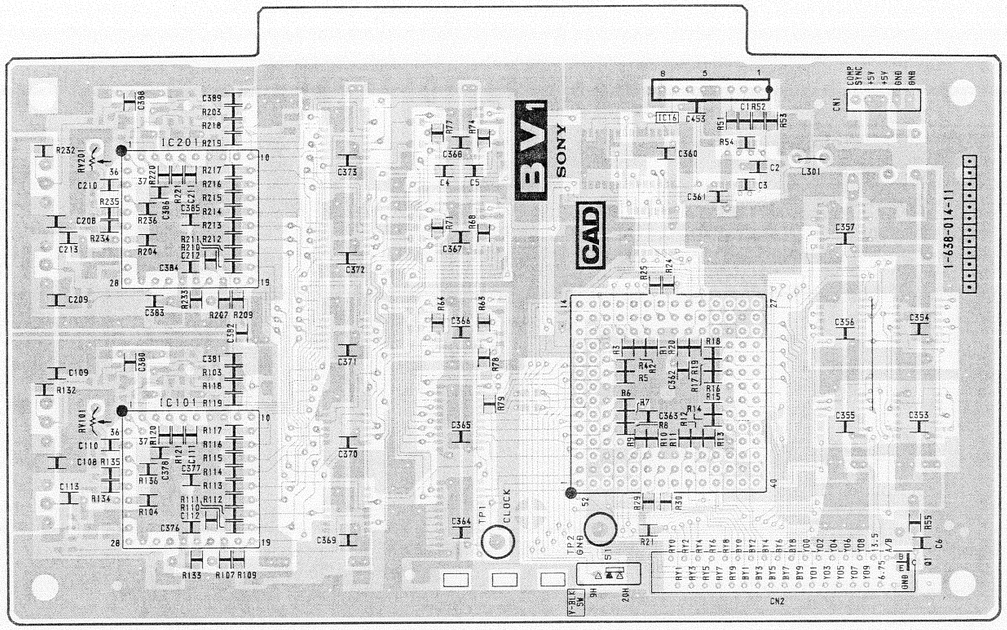
IC 1	MC74HC4053F	A/B SWITCH
2	MC74HC4053F	A/B SWITCH
3	MC74HC4053F	A/B SWITCH
4	MC74HC4053F	A/B SWITCH
5	MC74HC4053F	A/B SWITCH
6	74F574SJ	BUFFER
7	74F574SJ	BUFFER
8	MC10H350M	ECL → TTL CONVERTER
9	MC10H350M	ECL → TTL CONVERTER
10	MC10H350M	ECL → TTL CONVERTER
11	CXD8069G	D-1 DECODER
12	MC74HC04AF	INVERTER
13	CXD1030M	SYNC GENERATOR
15	SN74LS628NS	VCO
16	CX23065A	PHASE COMPARATOR
17	MC74F04M	INVERTER
18	MC74HC164FL	H-V BLANKING GEN
19	MC74HC08AF	AND GATE
20	MC74HC393F	H-V BLANKING GEN
21	MC74HC74AF	H-V BLANKING GEN
101	SBX1602A	S/P CONVERTER
102	TC7S00F	INPUT DETECTION
201	SBX1602A	S/P CONVERTER
202	TC7S00F	INPUT DETECTION
301	PST529CMT	RESET
Q 1	DTC144EK	A/B CONTROL
101	2SC2351	CABLE DRIVER
102	2SC2351	CABLE DRIVER
103	2SA812	CABLE DRIVER
104	2SC1623	
201	2SC2351	CABLE DRIVER
202	2SC2351	CABLE DRIVER
203	2SA812	CABLE DRIVER
204	2SC1623	
301	DTA144EK	RESET



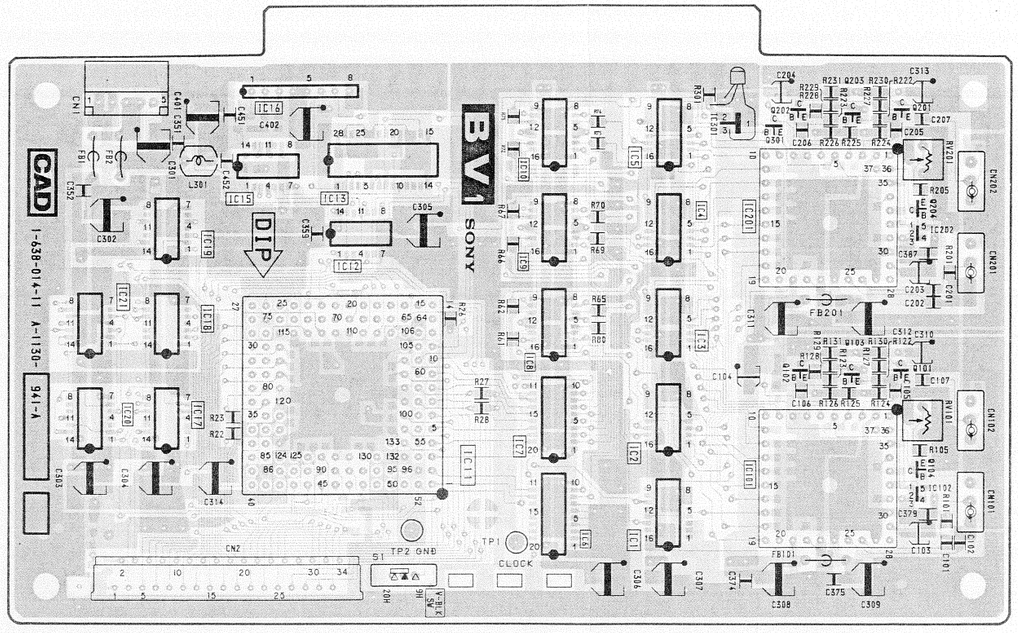
(1) 2.5 *Vp-p 27MHz*

BV1 BOARD (S/P CONVERTER, CABLE DRIVER, ECL/TTL CONV, D-1 DECODER, COMP SYNC GEN)

IC	201 101 — 16 11	IC
ADJ	RV201 RV101	ADJ
TP	1 2	TP



IC	21 20 — 19 18 — 17 — 16 15 — 13 12 — 11 — 10 9 8 7 6 — 5 4 3 2 1 — 201 101 — 202 102	IC
Q	202 203 201 301 204 102 103 101 104	Q
ADJ	RV201 RV101	ADJ
TP	2 1	TP

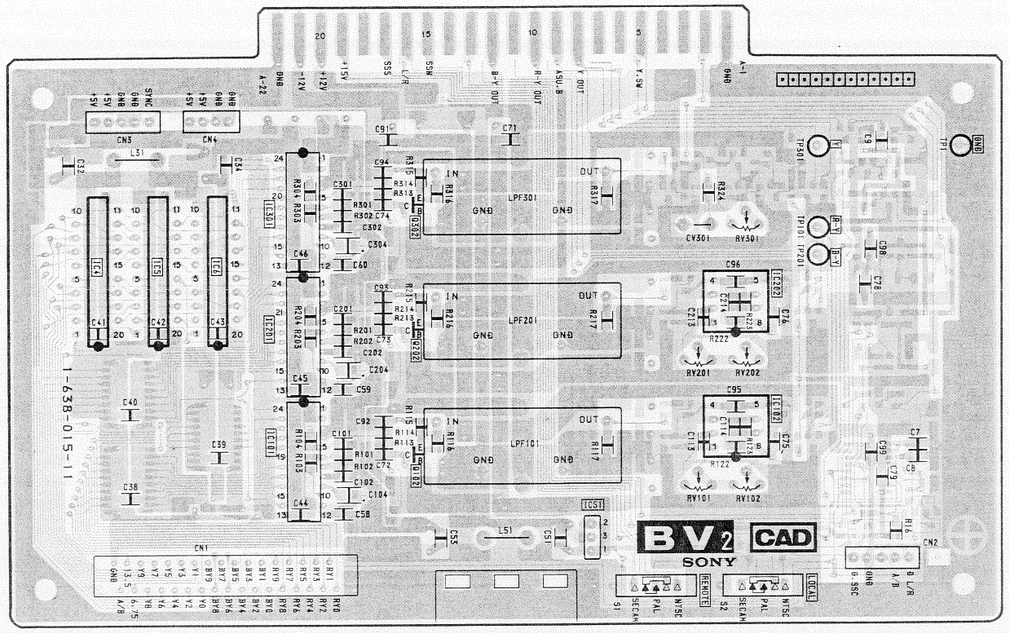


- : Conductor side pattern
- : Component side pattern

- : Conductor side pattern
- : Component side pattern

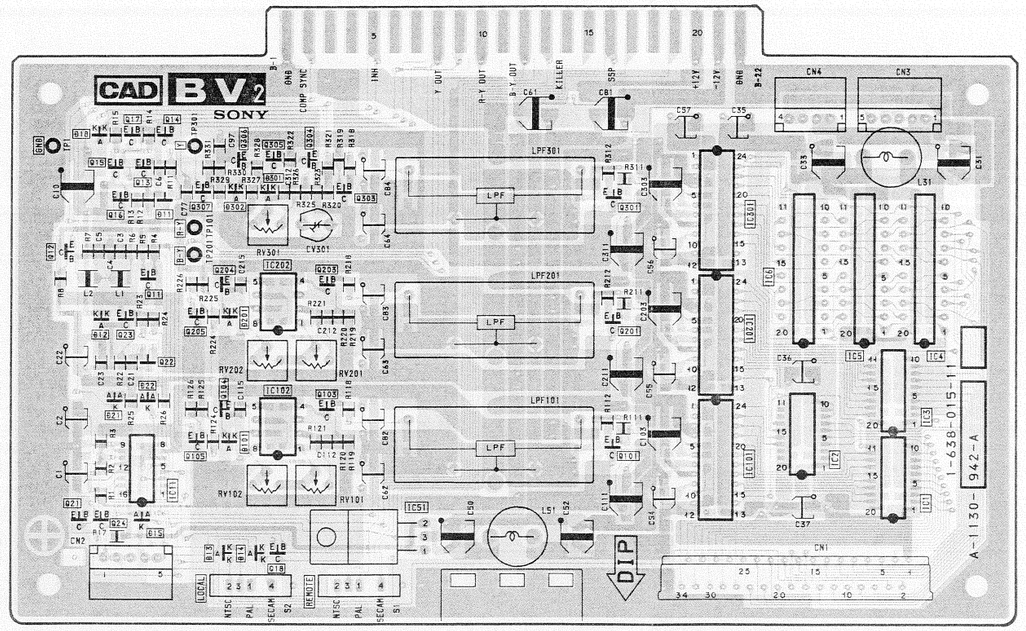
BV2 BOARD (BUFFER & DELAY, D/A CONV, Y AMP, R-Y/B-Y AMP & DELAY)

IC	4 5 6 301 201 101 51 202 102	IC
Q	302 202 101	Q
ADJ	CV301 RV301 RV201 RV202 RV101 RV102	ADJ
TP	301 101 201 1	TP



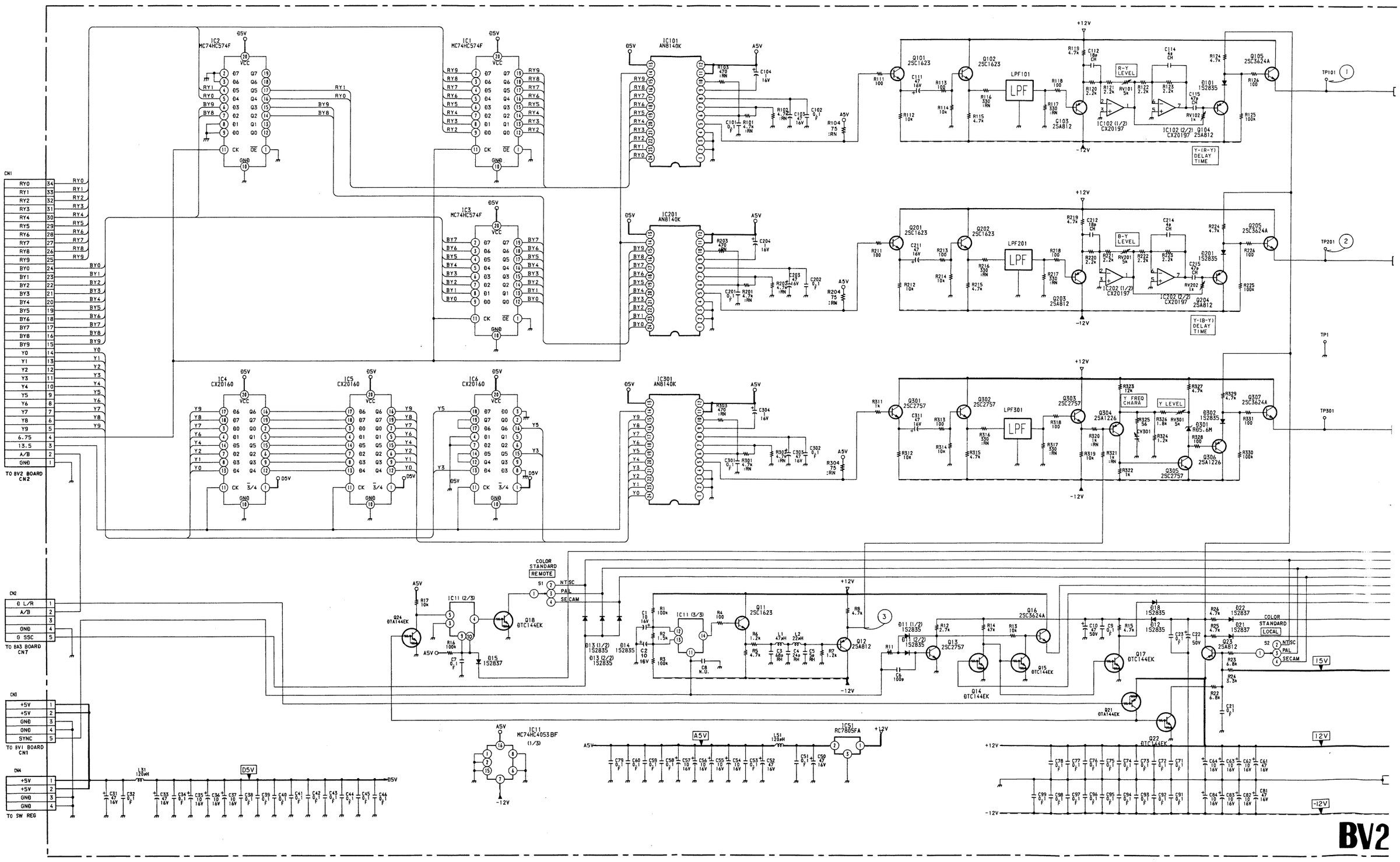
- : Conductor side pattern
- : Component side pattern

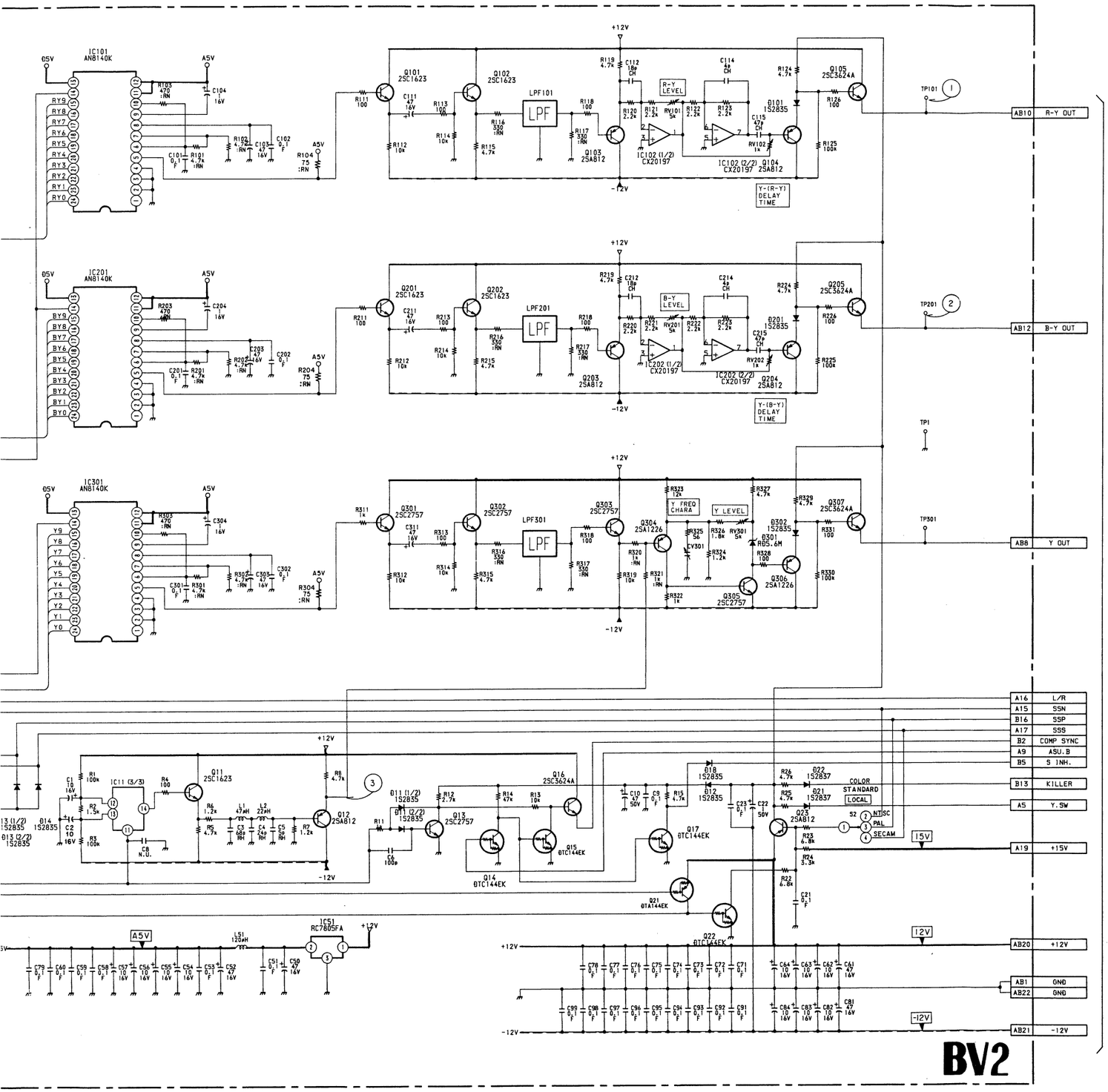
IC	11 202 102 51 301 201 101 6 2 5 3 1 4	IC
Q	17 14 306 305 304 303 15 13 307 203 12 16 11 205 204 301 23 22 105 104 18 103 21 24 201 101	Q
D	18 11 302 301 12 21 22 201 101 15 13 14	D
ADJ	RV301 CV301 RV202 RV201 RV102 RV101	ADJ

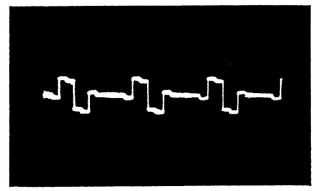


- : Conductor side pattern
- : Component side pattern

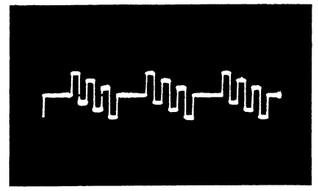
BV2 BOARD (BUFFER & DELAY, D/A CONV, Y AMP, R-Y/B-Y AMP & DELAY)



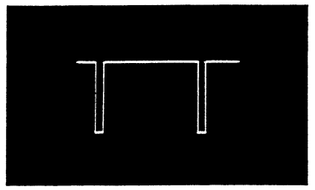




① 3 *Vp-p (H)*



② 3.8 *Vp-p (H)*

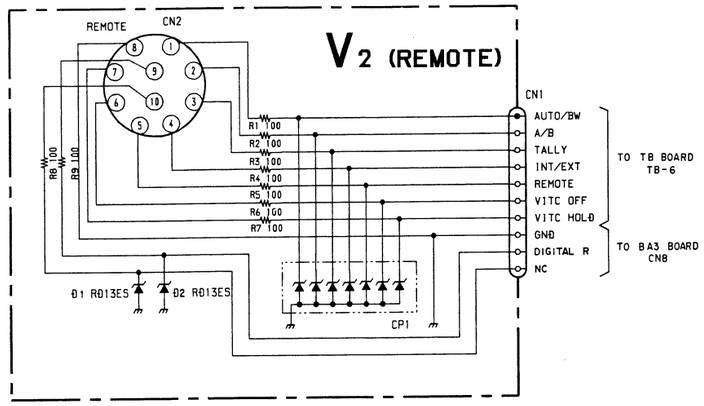


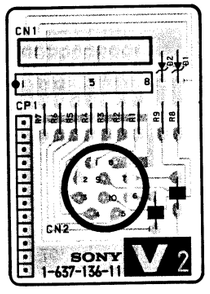
③ 1 *Vp-p (H)*

BV2 BOARD

IC 1	MC74HC574F	BUFFER
2	MC74HC574F	BUFFER
3	MC74HC574F	BUFFER
4	CX20160	BUFFER&DELAY
5	CX20160	BUFFER&DELAY
6	CX20160	BUFFER&DELAY
11	MC14053BF	SYNC PROCESS& LOCAL-MODE CONTROL
51	RC7805FA	5V REG
101	AN8140K	D/A CONVERTER
102	CX20197	R-Y DELAY
201	AN8140K	D/A CONVERTER
202	CX20197	B-Y DELAY
301	AN8140K	D/A CONVERTER
Q 11	2SC1623	SYNC PROCESS
12	2SA812	SYNC PROCESS
13	2SC2757	SYNC PROCESS
14	DTC144EK	SYNC PROCESS
15	DTC144EK	SYNC PROCESS
16	2SC3624A	SYNC PROCESS
17	DTC144EK	SYNC PROCESS
18	DTC144EK	LOCAL-MODE CONTROL
21	DTA144EK	SYSTEM CONTROL
22	DTC144EK	SYSTEM CONTROL
23	2SA812	SYSTEM CONTROL
24	DTA144EK	LOCAL-MODE CONTROL
101	2SC1623	BUFFER
102	2SC2351	BUFFER
103	2SA812	R-Y AMP&DELAY
104	2SA812	R-Y AMP&DELAY
105	2SC3624A	BUFFER
201	2SC1623	BUFFER
202	2SC1623	BUFFER
203	2SA812	B-Y AMP&DELAY
204	2SA812	B-Y AMP&DELAY
205	2SC3624A	BUFFER
301	2SC2757	BUFFER
302	2SC2757	BUFFER
303	2SC2757	Y AMP
304	2SA1226	Y AMP
305	2SC2757	Y AMP
306	2SA1226	Y AMP
307	2SC3624A	BUFFER
D 11	1S2835	SYNC PROCESS
12	1S2835	SYSTEM CONTROL
13	1S2835	LOCAL-MODE CONTROL
14	1S2835	LOCAL-MODE CONTROL
15	1S2837	LOCAL-MODE CONTROL
18	1S2835	
21	1S2837	SYSTEM CONTROL
22	1S2837	SYSTEM CONTROL
101	1S2835	R-Y AMP&DELAY
201	1S2835	B-Y AMP&DELAY
301	RD5.6M-B2	Y AMP
302	1S2835	Y AMP

V2 BOARD (REMOTE)

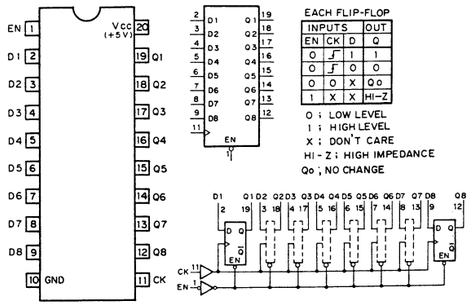




4-2. 半導体外形図
4-2. SEMICONDUCTORS

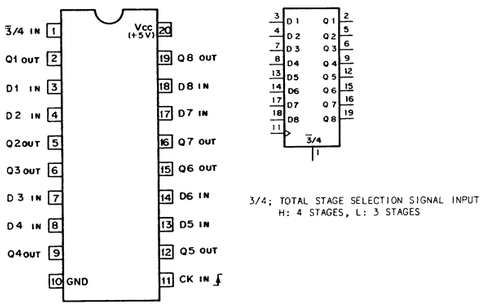
74F574SJ (NS) FLAT PACKAGE

TTL 3-STATE D-TYPE EDGE-TRIGGERED FLIP-FLOP
– TOP VIEW –



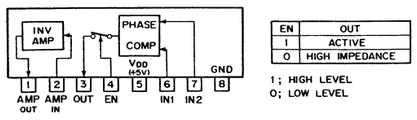
CX20160 (SONY)

TTL OCTAL 3 OR 4 STAGE SHIFT REGISTER
– TOP VIEW –

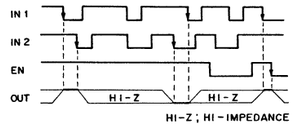


CX23065A (SONY)

N-MOS PHASE COMPARATOR WITH INVERSION AMPLIFIER
– PRINTED SIDE VIEW –

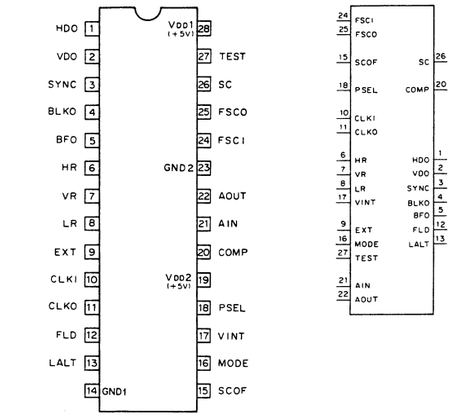


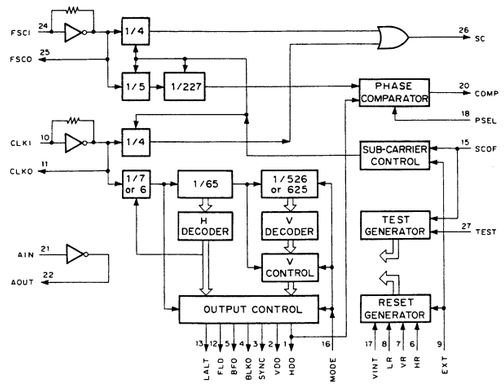
TIMING CHART



CXD1030M (SONY) FLAT PACKAGE

C-MOS SYNCHRONOUS SIGNAL GENERATOR
– TOP VIEW –





PIN No.	SYMBOL NAME	ABBREVATION
1	HDO	HORIZONTAL DRIVE PULSE OUTPUT
2	VDO	VARTICAL DRIVE PULSE OUTPUT
3	SYNC	COMPOSITE SYNCHRONOUS PULSE OUTPUT
4	BLKO	COMPOSITE BLANKING PULSE OUTPUT
5	BFO	BURST FLAG PULSE OUTPUT
6	HR	H RESET INPUT
7	VR	V RESET INPUT
8	LR	LINE ALTERNATE RESET INPUT
9	EXT	INTERNAL/EXTERNAL MODE SELECT
10	CLKI	CLOCK INPUT (NTSC : 14.31818MHz, PAL : 14.1875MHz)
11	CLKO	CLOCK OUTPUT
12	FLD	FIELD PULSE OUTPUT
13	LALT	LINE ALTERNATE PULSE OUTPUT
14	GND1	GND
15	SCOF	SUB-CARRIER OFF INPUT (ON/OFF)
16	MODE	NTSC/PAL MODE SELECT
17	VINT	INITIALIZE INPUT
18	PSEL	PHASE COMPARATE POLARITY SELECT
19	VDD2	+5V of INVERTER for FILTER
20	COMP	OUTPUT of PHASE COMPARATOR
21	AIN	INPUT of INVERTER for FILTER
22	AOUT	OUTPUT of INVERTER for FILTER
23	GND2	GND of INVERTER for FILTER
24	FSCI	4fsc CLOCK INPUT
25	FSCO	4fsc CLOCK OUTPUT
26	SC	SUB-CARRIER OUTPUT
27	TEST	TEST INPUT (NORMALLY LOW LEVEL)
28	VDD1	+5V

CXD8069G

C-MOS 4 :
PARALLEL
– BOTTOM

INPUT
ANA0 – ANA
ANB0 – ANE
ANIS
ANSL
CB0 – CB9
CK27
COEN
CR0 – CR9
EXTF
EXTH
INEH
INCH
TUB1, TUB2
TUS, TUC1,
LDAT, TSCK
LIOF
MA1, MA2
SLET
SLNP
TSLF, TSST
VC10 – VC1
VC20 – VC2
VDCS
Y0 – Y9

OUTPUT
AN0 H
AN1 V

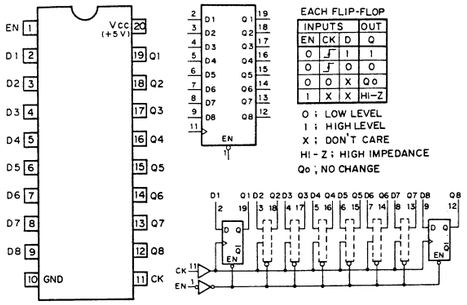
– CM9
– MU

8	
9	
10	
11	
12	O
13	O
14	O
15	O
16	O
17	O
18	O
19	O
20	O
21	O
22	O
23	O
24	I
25	I
26	I
27	I
28	I
29	O
30	O
31	–
32	–
33	–

4-2. 半導体外形図
4-2. SEMICONDUCTORS

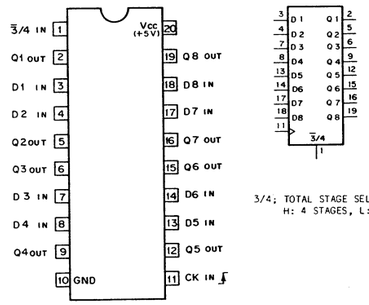
74F574SJ (NS) FLAT PACKAGE

TTL 3-STATE D-TYPE EDGE-TRIGGERED FLIP-FLOP
– TOP VIEW –



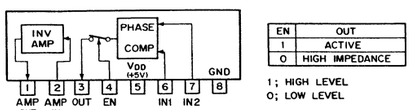
CX20160 (SONY)

TTL OCTAL 3 OR 4 STAGE SHIFT REGISTER
– TOP VIEW –

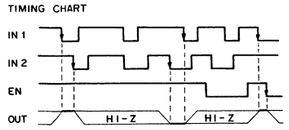


CX23065A (SONY)

N-MOS PHASE COMPARATOR WITH INVERSION AMPLIFIER
– PRINTED SIDE VIEW –

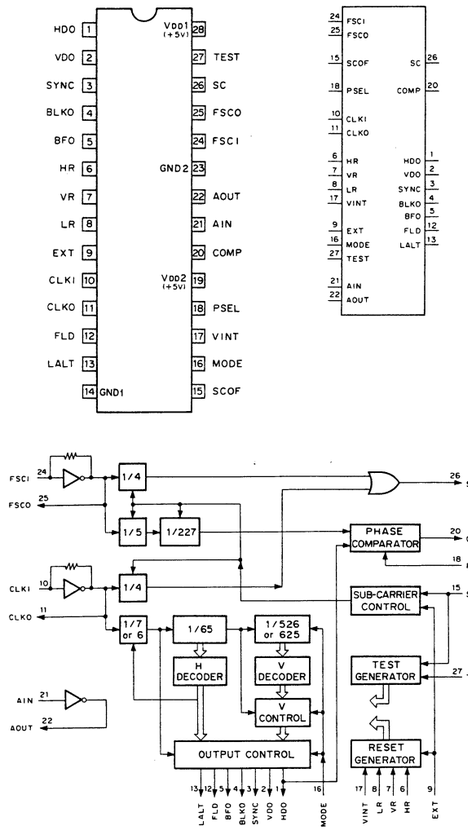


TIMING CHART



CXD1030M (SONY) FLAT PACKAGE

C-MOS SYNCHRONOUS SIGNAL GENERATOR
– TOP VIEW –



PIN No.	SYMBOL NAME	ABBREVATION
1	HDO	HORIZONTAL DRIVE PULSE OUTPUT
2	VDO	VARTICAL DRIVE PULSE OUTPUT
3	SYNC	COMPOSITE SYNCHRONOUS PULSE OUTPUT
4	BLKO	COMPOSITE BLANKING PULSE OUTPUT
5	BFO	BURST FLAG PULSE OUTPUT
6	HR	H RESET INPUT
7	VR	V RESET INPUT
8	LR	LINE ALTERNATE RESET INPUT
9	EXT	INTERNAL/EXTERNAL MODE SELECT
10	CLKI	CLOCK INPUT (NTSC : 14.31818MHz, PAL : 14.1875MHz)
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12	FLD	FIELD PULSE OUTPUT
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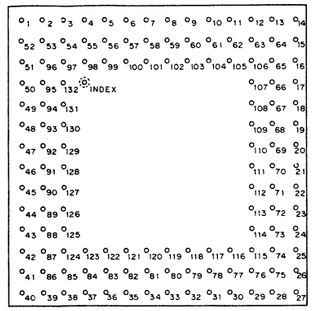
14	GND1	GND
15	SCOF	SUB-CARRIER OFF INPUT (ON/OFF)
16	MODE	NTSC/PAL MODE SELECT
17	VINT	INITIALIZE INPUT
18	PSEL	PHASE COMPARATE POLARITY SELECT
19	Vdd2	+5V of INVERTER for FILTER
20	COMP	OUTPUT of PHASE COMPARATOR
21	AIN	INPUT of INVERTER for FILTER
22	AOUT	OUTPUT of INVERTER for FILTER
23	GND2	GND of INVERTER for FILTER
24	FSCI	4fsc CLOCK INPUT
25	FSCO	4fsc CLOCK OUTPUT
26	SC	SUB-CARRIER OUTPUT
27	TEST	TEST INPUT (NORMALLY LOW LEVEL)
28	Vdd1	+5V

CXD8069G (SONY)

C-MOS 4 : 2 : 2 COMPONENT DIGITAL VIDEO
PARALLEL INTERFACE DECODER
– BOTTOM VIEW –



INPUT

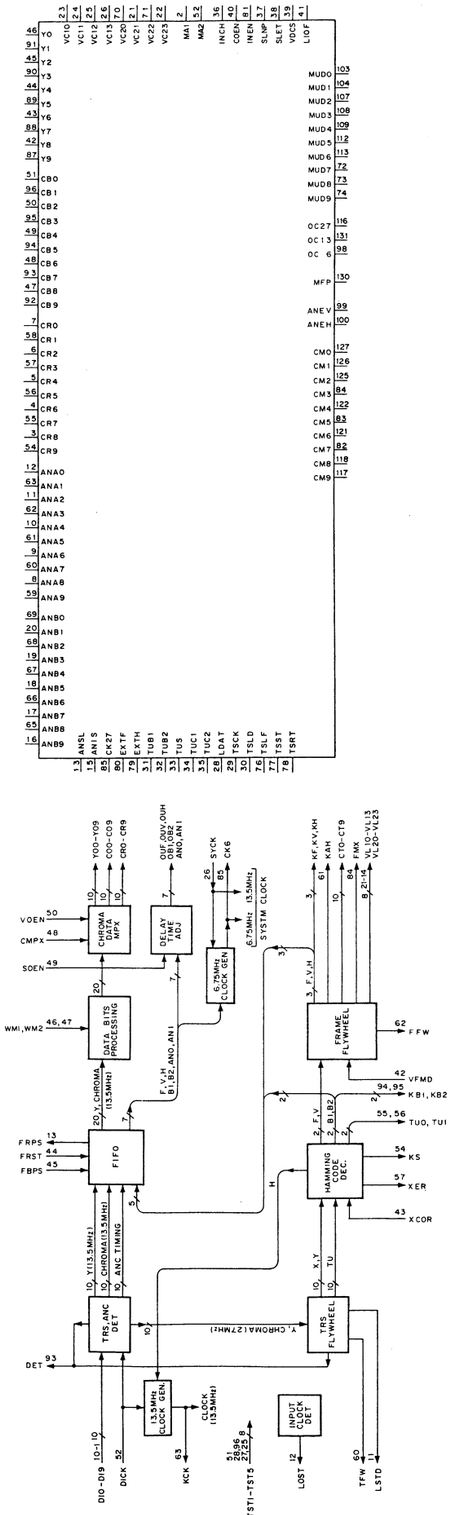
ANA0 – ANA9	: ANCILLARY SIGNAL (13.5MHz 20 BITS OR 27MHz 10 BITS)
ANB0 – ANB9	: ANCILLARY SIGNAL (13.5MHz 20 BITS)
ANIS	: ANC SIGNAL INSERT SELECTOR
ANSL	: ANC 10 BITS/20 BITS SIGNAL SELECTOR
CB0 – CB9	: CB OR CB • CR MPX SIGNAL
CK27	: 27MHz CLOCK
COEN	: CONNECT WITH "+5V"
CR0 – CR9	: CR OR CB • CR MPX SIGNAL (INPUT CHECK)
EXTF	: REFERENCE F
EXTH	: REFERENCE H
INEH	: CONNECT WITH "+5V"
INCH	: CONNECT WITH "+5V"
TUB1, TUB2	: CONNECT WITH "GND"
TUS, TUC1, TUC2	: CONNECT WITH "GND"
LDAT, TSCK, TSLD	: FOR TEST
LIOF	: DATA LIMIT SELECTOR (ON/OFF)
MA1, MA2	: ROUND MODE SELECTOR (ROUND, RAISE, CUT OFF, THROUGH)
SLET	: DATA SELECTOR (8 BITS OR 10 BITS)
SLNP	: 525 LINE/625 LINE SELECTOR
TSLF, TSST, TSRT	: FOR TEST
VC10 – VC13	: 525/60 (FIELD1) V BLANKING CONTROL
VC20 – VC23	: 525/60 (FIELD2) V BLANKING CONTROL
VDCS	: CHROMA SIGNAL SELECTOR (CB • CR MPX/CB, CR)
Y0 – Y9	: Y SIGNAL

OUTPUT

ANEH	: DATA INTERVAL SIGNAL ("HIGH" AT BETWEEN EAV AND SAV)
ANEV	: DATA VALID SIGNAL ("HIGH" AT THE DATA VALID PERIOD IN V BLK INTERVAL)
CM0 – CM9	: F, H COUNTER
MFP	: POSITION OF F COUNTER VALUE (MULTIPLEX SIGNAL)
MUD0 – MUD9	: MULTIPLEX DATA
OC6	: 6.75MHz CLOCK
OC13	: 13.5MHz CLOCK
OC27	: 27MHz CLOCK

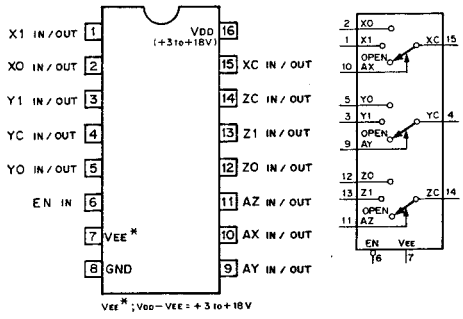
VDD = +5V

PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL
1	I	DI9	34	O	AN1	67	I/O	CT8	100	O	YO5
2	I	DI8	35	O	AN0	68	I/O	CT7	101	–	GND
3	I	DI7	36	–	NC	69	O	CR4	102	–	GND
4	I	DI6	37	–	NC	70	O	CR3	103	O	YO4
5	I	DI5	38	–	NC	71	I/O	CT6	104	O	YO3
6	I	DI4	39	–	NC	72	I/O	CT5	105	–	GND
7	I	DI3	40	–	NC	73	I	TDEN	106	–	GND
8	I	DI2	41	–	NC	74	I	TSCK	107	O	YO2
9	I	DI1	42	I	VFMD	75	–	GND	108	O	YO1
10	I	DI0	43	I	XCOR	76	O	OUH	109	O	YO0
11	O	LSTD	44	I	FRST	77	I/O	CT4	110	–	GND
12	O	LOST	45	I	FBPS	78	I/O	CT3	111	–	GND
13	O	FRSP	46	I	WM0	79	I/O	CT2	112	O	CO9
14	O	VL23	47	I	WM1	80	O	CR2	113	O	CO8
15	O	VL22	48	I	CMPX	81	O	CR1	114	–	VDD
16	O	VL21	49	I	SOEN	82	I/O	CT1	115	–	GND
17	O	VL20	50	I	VOEN	83	I/O	CT0	116	O	CO7
18	O	VL13	51	I	TST1	84	I/O	FMX	117	O	CO6
19	O	VL12	52	I	DICK	85	O	CK6	118	O	CO5
20	O	VL11	53	–	GND	86	–	VDD	119	–	GND
21	O	VL10	54	O	KS	87	O	CR0	120	–	GND
22	O	OUF	55	O	TU1	88	O	KF	121	O	CO4
23	O	OUV	56	O	TU0	89	O	KV	122	O	CO3
24	I	TSV	57	O	XER	90	O	KH	123	–	GND
25	I	TST5	58	O	CR7	91	O	CR9	124	–	GND
26	I	SYCK	59	O	CR6	92	O	CR8	125	O	CO2
27	I	TST4	60	O	TFW	93	O	DET	126	O	CO1
28	I	TST3	61	O	KAH	94	O	KB1	127	O	CO0
29	O	OB2	62	I/O	FFW	95	O	KB2	128	–	GND
30	O	OB1	63	O	KCK	96	I	TST2	129	–	GND
31	–	NC	64	–	VDD	97	–	GND	130	O	YO9
32	–	NC	65	O	CR5	98	O	YO7	131	O	YO8
33	–	NC	66	I/O	CT9	99	O	YO6	132	–	VDD



HD14053BCP (HITACHI)
MC14053BF (MOTOROLA) FLAT PACKAGE
TC4053BFHB (TOSHIBA) FLAT PACKAGE
uPD4053BG (NEC) FLAT PACKAGE

C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
– TOP VIEW –



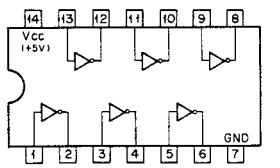
VEE* ; VDD – VEE = +3 to +18V

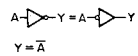
CONT. INPUTS		ON
EN	A (X,Y,Z,)	CHANNEL
0	0	0
0	1	1
1	X	OPEN

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE.

MC74F04M (MOTOROLA) FLAT PACKAGE

TTL INVERTER
– TOP VIEW –





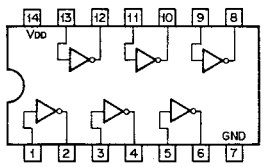
$Y = \overline{A}$

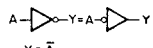
A	Y
0	1
1	0

0; LOW LEVEL
1; HIGH LEVEL

MC74HC04AF (MOTOROLA) FLAT PACKAGE

C-MOS HEX INVERTER
– TOP VIEW –





$Y = \overline{A}$

A	Y
0	1
1	0

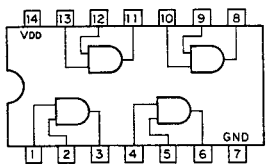
0; LOW LEVEL
1; HIGH LEVEL

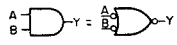
NOTE :

TYPE	VDD
74ACT04 TYPES 74HCT04 TYPES	+5V
TC74AC04F	+2 to +5.5V
TC74ACT04F	+4.5 to +5.5V
OTHER TYPES	+2 to +6V

MC74HC08AF (MOTOROLA) FLAT PACKAGE

C-MOS QUAD 2-INPUT AND GATE
– TOP VIEW –





A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

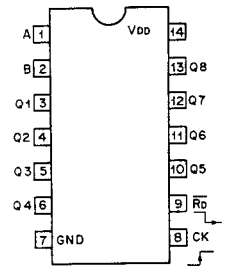
0; LOW LEVEL
1; HIGH LEVEL

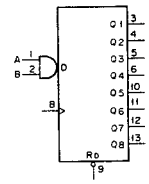
NOTE :

TYPE	VDD
TC74AC08F	+2 to +5.5V
OTHER TYPES	+2 to +6V

MC74HC164F (MOTOROLA) FLAT PACKAGE

C-MOS 8-BIT SERIAL-IN/PARALLEL-OUT SHIFT REGISTER
– TOP VIEW –



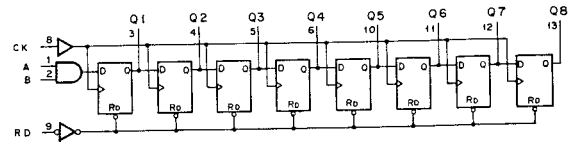


INPUTS				OUTPUTS			
RD	CK	A	B	Q1	Q2	----	Q8
0	X	X	X	0	0	0	0
1	0	X	X	Q1o	Q2o	----	Q8o
1	↑	1	1	1	Q1n	----	Q7n
1	↑	0	X	0	Q1n	----	Q7n
1	↑	X	0	0	Q1n	----	Q7n

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

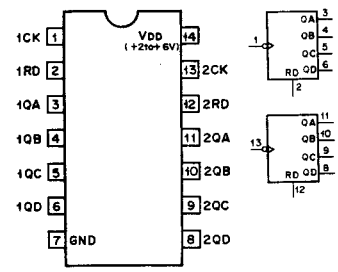
NOTE :

TYPE	VDD
TC74AC164F	+2 to +5.5V
OTHER TYPES	+2 to +6V



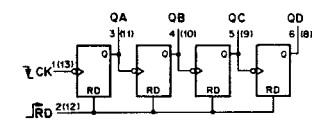
MC74HC393F (MOTOROLA)

C-MOS 4-BIT BINARY COUNTER
– TOP VIEW –



COUNT SEQUENCE

COUNT	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1



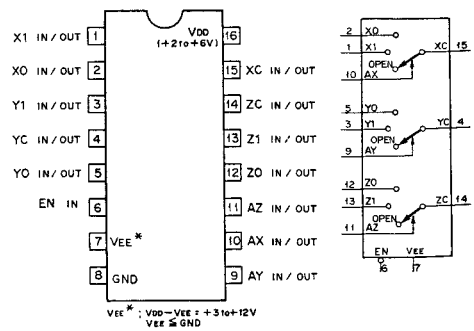
RESET/COUNT FUNCTION

RD	QD	QC	QB	QA
1	0	0	0	0
0	COUNT			

0; LOW LEVEL
1; HIGH LEVEL

MC74HC4053F (MOTOROLA) FLAT PACKAGE

C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
– TOP VIEW –



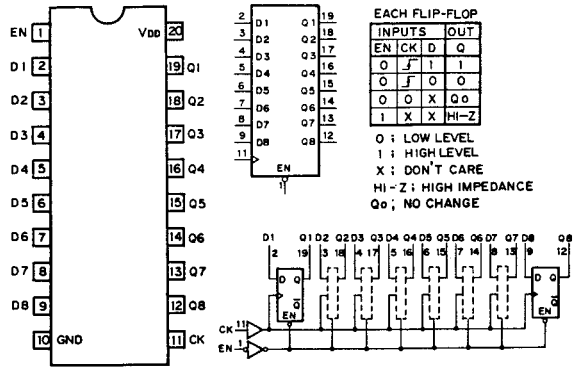
VEE* ; VDD – VEE = +3 to +12V
VEE ≧ GND

CONT. INPUTS		ON
EN	A (X,Y,Z,)	CHANNEL
0	0	0
0	1	1
1	X	OPEN

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE.

MC74HC574F (MOTOROLA)

C-MOS 3-STATE D-TYPE EDGE-TRIGGERED FLIP-FLOP
– TOP VIEW –



EACH FLIP-FLOP			
INPUTS			OUT
EN	CK	D	Q
0	↑	1	1
0	↑	0	0
0	0	X	Q0
1	X	X	HI-Z

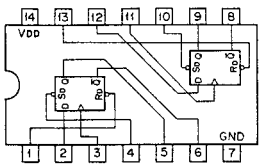
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE
Q0 ; NO CHANGE

NOTE :

TYPE	VDD
74AC/74HC	+2 to +6V
74HCT	+5V
TC74AC574F	+2 to +5.5V

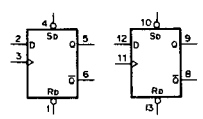
MC74HC74AF (MOTOROLA) FLAT PACKAGE

C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET
– TOP VIEW –



INPUTS				OUTPUTS	
S̄D	R̄D	CK	D	Qn+1	Q̄n+1
0	1	X	X	1	0
1	0	X	X	0	1
0	0	X	X	1	1
1	1	↑	1	1	0
1	1	↑	0	0	1
1	1	0	X	Qn	Q̄n

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

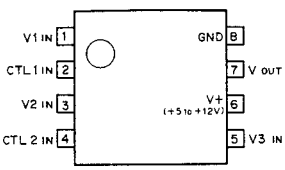


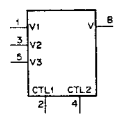
NOTE :

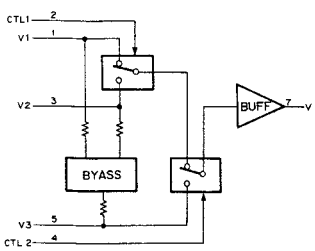
TYPE	VDD
74ACT	+5V
TC74AC74F	+2 to +5.5V
TC74ACT74F	+4.5 to +5.5V
OTHER TYPES	+2 to +6V

NJM2234M (JRC) FLAT PACKAGE

3-INPUT SIGNAL VIDEO SWITCH
– TOP VIEW –





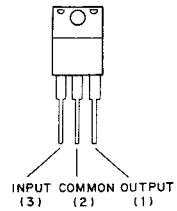


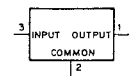
CTL1	CTL2	V
0	0	V1
1	0	V2
X	1	V3

0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE

RC7805FA (RAYTHEON) + 5V

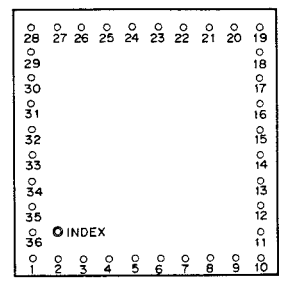
POSITIVE VOLTAGE REGULATOR
– FRONT VIEW –

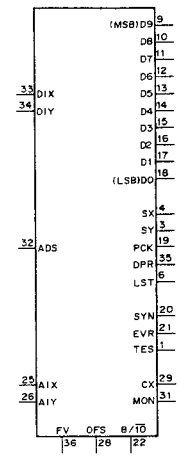




SBX1602 (SONY)

8- OR 10-BIT SERIAL-TO-PARALLEL CONVERTER
– TOP VIEW –





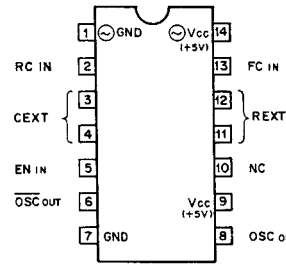
INPUT
ADS : SERIAL DATA SELECT INPUT (H : DI, L : AI)
AIX, AIY : EQUALIZER INPUTS
DIX, DIY : SERIAL DATA INPUTS
OFS : AGC OFFSET ADJ. INPUT
8/10 : 8BIT/10BIT SELECT INPUT
FV : VCO FREQ. ADJ. INPUT

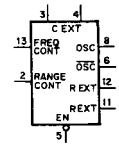
OUTPUT
CX : EQUALIZER DETECT OUTPUT (L : NO INPUT)
D9 – D0 : PARALLEL DATA OUTPUTS
DPR : SERIAL DATA DETECT OUTPUT (L : NO INPUT)
EVR : REFERENCE VOLTAGE FOR PARALLEL OUTPUT
LST : PLL LOCK DETECT OUTPUT (H : LOCK)
MON : EQUALIZER MONITOR OUTPUT
PCK : PARALLEL CLOCK OUTPUT
SX, SY : SERIAL DATA OUTPUTS
SYN : TRS DETECT OUTPUT
TES : TEST TERMINAL

PIN	I/O	SYMBOL	PIN	I/O	SYMBOL	PIN	I/O	SYMBOL	PIN	I/O	SYMBOL
1	O	TES	10	O	D8	19	O	PCK	28	I	OFS
2	—	GND	11	O	D7	20	O	SYN	29	O	CX
3	O	SY	12	O	D6	21	O	EVR	30	—	GND
4	O	SX	13	O	D5	22	I	8/10	31	O	MON
5	—	GND	14	O	D4	23	—	VEE2(– 5V)	32	I	ADS
6	O	LST	15	O	D3	24	—	GND	33	I	DIX
7	—	VEE1(– 5V)	16	O	D2	25	I	AIX	34	I	DIY
8	—	VEL(– 3.5V)	17	O	D1	26	I	AIY	35	O	DPR
9	O	D9(MSB)	18	O	D0(LSB)	27	—	GND	36	I	FV

SN74LS628NS (TI)

TTL VOLTAGE-CONTROLLED OSCILLATOR
– TOP VIEW –





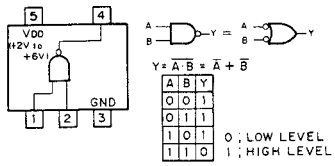
EN	OSC	OSC
0	ENABLE	ENABLE
1	0	1

0; LOW LEVEL
1; HIGH LEVEL

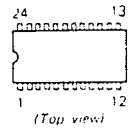
TC7S00F (TOSHIBA) FLAT PACKAGE

C-MOS 2-INPUT NAND GATE

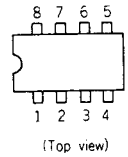
– TOP VIEW –



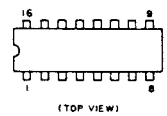
AN8140K



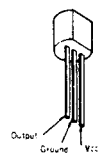
CX20197



MC10H350M

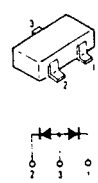


PST529CM

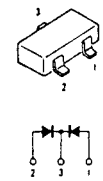


2SA1162
2SA1226
2SA812
2SC1623
2SC2351
2SC2757
2SC3624A
DTA144EK
DTC144EK

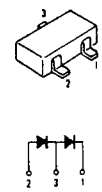
1S2835



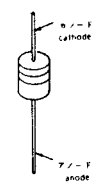
1S2837



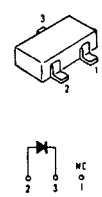
1SS123



RD13ES-B2



RD4.3M-B2
RD5.6M-B2
RD6.8M-B



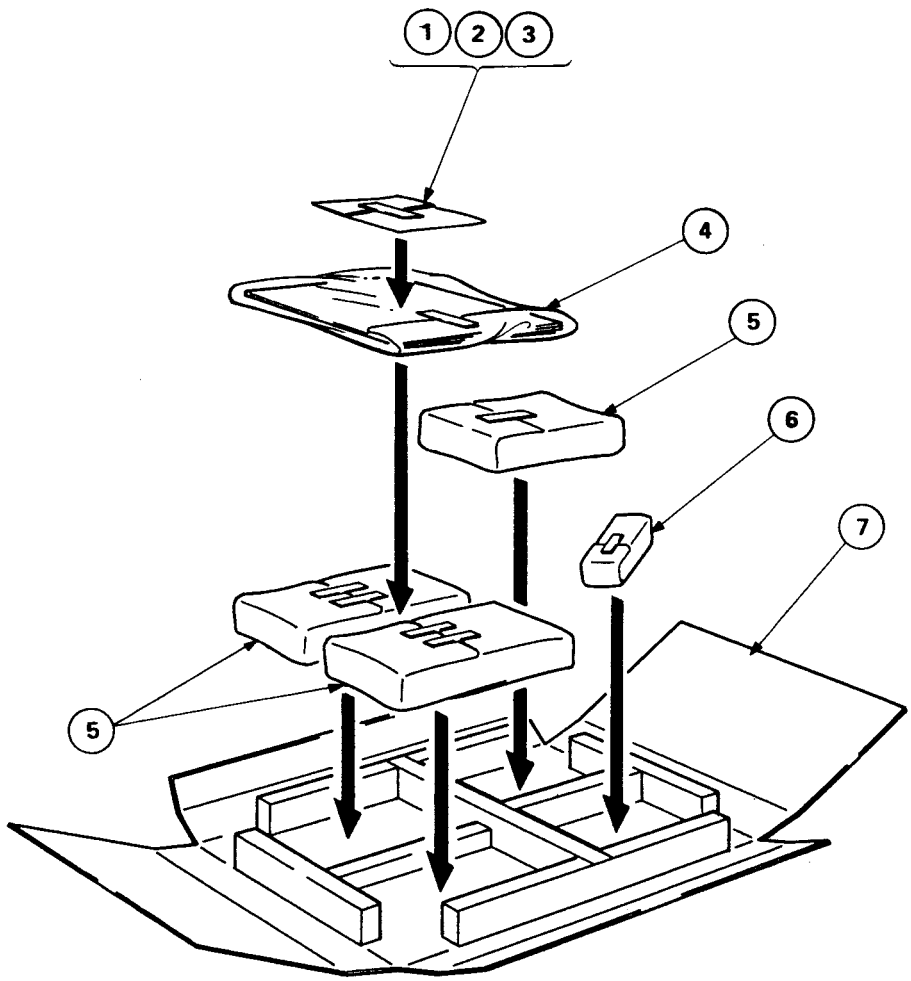
第 5 章
梱包図
SECTION 5
PACKING

【使用上の注意】

・組立部品の構成部品は備考欄に照合番号で示します。
・＊印の部品は常備在庫しておりません。
受注して供給できるまで，日数を要します。
・Price：国内価格

NOTE:

- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Price : It does not apply to the countries except for Japan.



REF.NO.	PART NO.	DESCRIPTION	PRICE
1	1-941-802-01	CONNECTOR ASSY, MICRO 5P	D
2	1-941-803-03	CONNECTOR ASSY, MICRO 4P (BKM-2085-14)	
3	2-136-932-01	LABEL, 4:2:2	G
4	4-031-396-01	MANUAL, OPERATION & MAINTENANCE	
4	4-031-396-11	MANUAL, OPERATION & MAINTENANCE (SERIAL NO. 2002776 AND HIGHER BKM-2085-14) (SERIAL NO. 2002926 AND HIGHER BKM-2085-20)	
5	*2-113-038-01	CUSHION B	B
6	*2-113-037-01	CUSHION A	A
7	*4-031-386-01	INDIVIDUAL CARTON (BKM-2085-20)	M
7	*4-031-409-01	INDIVIDUAL CARTON (BKM-2085-14)	M

BA3

Ref.No	Part No.	Description				Price
	*A-1135-662-A	BA3 BOARD, COMPLETE				
		**********				
	4-053-304-01	GASKET				
	*4-353-708-00	HOOK, FINGER				A
	7-682-547-04	SCREW BVTT 3X6 (S)				
		CAPACITOR				
C1	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C2	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C3	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C4	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C5	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C6	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C7	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C9	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C10	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C11	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C12	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C13	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C14	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C15	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C16	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C17	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C18	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C19	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C20	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C21	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C22	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C23	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C24	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C25	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C26	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C27	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C28	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C29	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C30	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C31	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C32	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C33	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C34	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C35	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C36	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C37	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C38	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C39	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C40	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C41	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C42	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C43	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C44	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C46	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C47	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C101	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C102	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C103	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	A
C104	1-163-088-00	CERAMIC CHIP	5PF	0.25PF	50V	A
C105	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C111	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C112	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C113	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C114	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C115	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C116	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C201	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C202	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C203	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	A
C204	1-163-088-00	CERAMIC CHIP	5PF	0.25PF	50V	A
C205	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C211	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C212	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C213	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C214	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C215	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C216	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C301	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C302	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C303	1-163-241-11	CERAMIC CHIP	39PF	5%	50V	A
C304	1-163-227-11	CERAMIC CHIP	10PF	5%	50V	A
C305	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C306	1-163-088-00	CERAMIC CHIP	5PF	0.25PF	50V	A
C311	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C312	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C313	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C314	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C315	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C316	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C401	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C402	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C403	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	A
C404	1-163-088-00	CERAMIC CHIP	5PF	0.25PF	50V	A
C411	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C412	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C413	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C414	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C415	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C416	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C501	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C502	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C503	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	A
C504	1-163-088-00	CERAMIC CHIP	5PF	0.25PF	50V	A
C505	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C511	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C512	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C513	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C514	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C515	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C516	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C601	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C602	1-124-779-00	ELECT CHIP	10MF	20%	16V	B

Ref.No	Part No.	Description				Price
C603	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	A
C604	1-163-088-00	CERAMIC CHIP	5PF	0.25PF	50V	A
C611	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C612	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C613	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C614	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C615	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C616	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C701	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	A
C702	1-163-123-00	CERAMIC CHIP	180PF	5%	50V	A
C703	1-163-227-11	CERAMIC CHIP	10PF	5%	50V	A
C704	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C705	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	A
C706	1-126-193-11	ELECT CHIP	1MF	20%	50V	A
C707	1-126-603-11	ELECT CHIP	4.7MF	20%	35V	A
C708	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C709	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	A
C710	1-163-137-00	CERAMIC CHIP	680PF	5%	50V	A
C711	1-163-145-00	CERAMIC CHIP	0.0015MF	5%	50V	A
C712	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	A
C713	1-126-193-11	ELECT CHIP	1MF	20%	50V	A
C714	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C715	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	A
C716	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C717	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C718	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C719	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A

CONNECTOR

CN1	*1-566-041-11	PIN, CONNECTOR 2P	A
CN2	*1-566-041-11	PIN, CONNECTOR 2P	A
CN3	*1-566-041-11	PIN, CONNECTOR 2P	A
CN4	*1-566-041-11	PIN, CONNECTOR 2P	A
CN5	*1-566-041-11	PIN, CONNECTOR 2P	A
CN6	*1-566-041-11	PIN, CONNECTOR 2P	A
CN7	*1-566-044-11	PIN, CONNECTOR 5P	A
CN8	*1-566-041-11	PIN, CONNECTOR 2P	A

TRIMMER

CV101	1-141-304-21	TRIMMER, CERAMIC	B
CV102	1-141-260-00	TRIMMER, CERAMIC	C
CV201	1-141-304-21	TRIMMER, CERAMIC	B
CV202	1-141-260-00	TRIMMER, CERAMIC	C
CV401	1-141-304-21	TRIMMER, CERAMIC	B
CV402	1-141-260-00	TRIMMER, CERAMIC	C
CV501	1-141-304-21	TRIMMER, CERAMIC	B
CV502	1-141-260-00	TRIMMER, CERAMIC	C
CV601	1-141-304-21	TRIMMER, CERAMIC	B
CV602	1-141-260-00	TRIMMER, CERAMIC	C

DIODE

D1	8-719-157-36	DIODE RD6.8M-B	
D2	8-719-104-34	DIODE 1S2835	A
D3	8-719-400-18	DIODE 1S2837	A
D4	8-719-104-34	DIODE 1S2835	A
D701	8-719-800-76	DIODE 1SS123	A
D702	8-719-105-64	DIODE RD4.3M-B2	A
D703	8-719-400-18	DIODE 1S2837	A
D704	8-719-104-34	DIODE 1S2835	A
D705	8-719-400-18	DIODE 1S2837	A
D706	8-719-104-34	DIODE 1S2835	A
D707	8-719-104-34	DIODE 1S2835	A

IC

IC1	8-759-710-07	IC NJM2234M	C
IC2	8-759-710-07	IC NJM2234M	C
IC3	8-759-710-07	IC NJM2234M	C
IC4	8-759-710-07	IC NJM2234M	C
IC5	8-759-300-71	IC MC14053BF	E
IC6	8-759-300-71	IC MC14053BF	E

TRANSISTOR

Q1	8-729-122-63	TRANSISTOR 2SA1226-E4	B
Q2	8-729-901-06	TRANSISTOR DTA144EK	A
Q3	8-729-901-01	TRANSISTOR DTC144EK	A
Q4	8-729-901-06	TRANSISTOR DTA144EK	A
Q5	8-729-901-06	TRANSISTOR DTA144EK	A
Q6	8-729-901-06	TRANSISTOR DTA144EK	A
Q7	8-729-901-06	TRANSISTOR DTA144EK	A
Q8	8-729-901-01	TRANSISTOR DTC144EK	A
Q9	8-729-901-01	TRANSISTOR DTC144EK	A
Q10	8-729-901-06	TRANSISTOR DTA144EK	A
Q11	8-729-901-01	TRANSISTOR DTC144EK	A
Q12	8-729-901-01	TRANSISTOR DTC144EK	A
Q101	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q102	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q103	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q104	8-729-122-63	TRANSISTOR 2SA1226-E4	B
Q105	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q201	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q202	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q203	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q204	8-729-122-63	TRANSISTOR 2SA1226-E4	B
Q205	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q301	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q302	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q303	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q304	8-729-122-63	TRANSISTOR 2SA1226-E4	B
Q305	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q401	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q402	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q403	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q404	8-729-122-63	TRANSISTOR 2SA1226-E4	B
Q405	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q501	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q502	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q503	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q504	8-729-122-63	TRANSISTOR 2SA1226-E4	B
Q505	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q601	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q602	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q603	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q604	8-729-122-63	TRANSISTOR 2SA1226-E4	B
Q605	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q701	8-729-216-22	TRANSISTOR 2SA1162-G	A
Q702	8-729-100-66	TRANSISTOR 2SC1623-L6	A
Q703	8-729-100-66	TRANSISTOR 2SC1623-L6	A
Q704	8-729-100-66	TRANSISTOR 2SC1623-L6	A
Q705	8-729-100-66	TRANSISTOR 2SC1623-L6	A
Q706	8-729-216-22	TRANSISTOR 2SA1162-G	A
Q707	8-729-100-66	TRANSISTOR 2SC1623-L6	A
Q708	8-729-216-22	TRANSISTOR 2SA1162-G	A
Q709	8-729-100-66	TRANSISTOR 2SC1623-L6	A
Q710	8-729-216-22	TRANSISTOR 2SA1162-G	A
Q711	8-729-216-22	TRANSISTOR 2SA1162-G	A
Q712	8-729-216-22	TRANSISTOR 2SA1162-G	A
Q713	8-729-216-22	TRANSISTOR 2SA1162-G	A
Q714	8-729-100-66	TRANSISTOR 2SC1623-L6	A
Q715	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q716	8-729-100-66	TRANSISTOR 2SC1623-L6	A
Q717	8-729-216-22	TRANSISTOR 2SA1162-G	A

BV1

Ref.No	Part No.	Description				Price
C357	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C359	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C360	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C361	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C362	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C363	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C364	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C365	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C366	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C367	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C368	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C369	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C370	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C371	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C372	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C373	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C374	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C375	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C376	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C377	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C378	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C379	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C380	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C381	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C382	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C383	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C384	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C385	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C386	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C387	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C388	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C389	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C401	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C402	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C451	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C452	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A
C453	1-164-232-11	CERAMIC CHIP	0.01MF		50V	A

CONNECTOR

CN1	*1-566-044-11	PIN, CONNECTOR 5P	A
CN2	*1-563-018-11	CONNECTOR, F.P.C 34P	F
CN101	*1-569-170-11	CONNECTOR,COAXIAL (SMALL TYPE)	B
CN102	*1-569-170-11	CONNECTOR,COAXIAL (SMALL TYPE)	B
CN201	*1-569-170-11	CONNECTOR,COAXIAL (SMALL TYPE)	B
CN202	*1-569-170-11	CONNECTOR,COAXIAL (SMALL TYPE)	B

FERRITE BEAD RING

FB1	1-535-178-00	RES, FERRITE	C
FB2	1-535-178-00	RES, FERRITE	C
FB101	1-535-178-00	RES, FERRITE	C
FB201	1-535-178-00	RES, FERRITE	C

IC

IC1	8-759-011-65	IC MC74HC4053F	E
IC2	8-759-011-65	IC MC74HC4053F	E
IC3	8-759-011-65	IC MC74HC4053F	E
IC4	8-759-011-65	IC MC74HC4053F	E
IC5	8-759-011-65	IC MC74HC4053F	E
IC6	8-759-990-68	IC 74F574SJ	K
IC7	8-759-990-68	IC 74F574SJ	K
IC8	8-759-037-28	IC MC10H350M	
IC9	8-759-037-28	IC MC10H350M	
IC10	8-759-037-28	IC MC10H350M	
IC11	8-759-150-98	IC CXD8069G	VJ
IC12	8-759-032-11	IC MC74HC04AF	A
IC13	8-752-321-16	IC CXD1030M	K
IC15	8-759-931-47	IC SN74LS628NS	G
IC16	8-752-306-51	IC CX23065A	H
IC17	8-759-033-02	IC MC74F04M	B
IC18	8-759-013-92	IC MC74HC164F	D
IC19	8-759-032-14	IC MC74HC08AF	A
IC20	8-759-013-94	IC MC74HC393F	E
IC21	8-759-032-23	IC MC74HC74AF	B
IC101	8-741-602-01	IC SBX1602A	VB
IC102	8-759-231-32	IC TC7S00F	A
IC201	8-741-602-01	IC SBX1602A	VB
IC202	8-759-231-32	IC TC7S00F	A
IC301	8-759-991-19	IC PST529CMT	D

SOCKET

ICS11	1-540-084-11	SOCKET, IC (PGA TYPE)	M
ICS101	*1-540-106-11	SOCKET, IC	K
ICS201	*1-540-106-11	SOCKET, IC	K

COIL

L301	1-408-421-00	INDUCTOR 100UH	A

TRANSISTOR

Q1	8-729-901-01	TRANSISTOR DTC144EK	A
Q101	8-729-101-11	TRANSISTOR 2SC2351-R2	C
Q102	8-729-101-11	TRANSISTOR 2SC2351-R2	C
Q103	8-729-216-22	TRANSISTOR 2SA1162-G	A
Q104	8-729-100-66	TRANSISTOR 2SC1623-L6	A
Q201	8-729-101-11	TRANSISTOR 2SC2351-R2	C
Q202	8-729-101-11	TRANSISTOR 2SC2351-R2	C
Q203	8-729-216-22	TRANSISTOR 2SA1162-G	A
Q204	8-729-100-66	TRANSISTOR 2SC1623	A
Q301	8-729-901-06	TRANSISTOR DTA144EK	A

RESISTOR

R1	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R2	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R3	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R4	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R5	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R6	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R7	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R8	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R9	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R10	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R11	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R12	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R13	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R14	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R15	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R16	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R17	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R18	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R19	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R20	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R21	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R22	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R23	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R24	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R25	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R26	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R27	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R28	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R29	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R30	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A

Ref.No	Part No.	Description				Price
R51	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R52	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R53	1-216-089-00	METAL GLAZE	47K	5%	1/10W	A
R54	1-216-045-00	METAL GLAZE	680	5%	1/10W	A
R55	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R61	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R62	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R63	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R64	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R65	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R66	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R67	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R68	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R69	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R70	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R71	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R72	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R73	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R74	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R75	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R76	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R77	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R78	1-216-021-00	METAL GLAZE	68	5%	1/10W	A
R79	1-216-021-00	METAL GLAZE	68	5%	1/10W	A
R80	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R101	1-216-624-11	METAL CHIP	75	0.50%	1/10W	A
R103	1-216-081-00	METAL GLAZE	22K	5%	1/6W	A
R104	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R105	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	A
R107	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R109	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R110	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R111	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R112	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R113	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R114	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R115	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R116	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R117	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R118	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R119	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R120	1-216-033-00	METAL GLAZE	220	5%	1/10W	A
R121	1-216-033-00	METAL GLAZE	220	5%	1/10W	A
R122	1-216-023-00	METAL GLAZE	82	5%	1/10W	A
R123	1-216-023-00	METAL GLAZE	82	5%	1/10W	A
R124	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R125	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	A
R126	1-216-064-00	METAL GLAZE	4.3K	5%	1/10W	A
R127	1-216-013-00	METAL GLAZE	33	5%	1/10W	A
R128	1-216-013-00	METAL GLAZE	33	5%	1/10W	A
R129	1-216-624-11	METAL CHIP	75	0.50%	1/10W	A
R130	1-216-624-11	METAL CHIP	75	0.50%	1/10W	A
R131	1-216-624-11	METAL CHIP	75	0.50%	1/10W	A
R132	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R133	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R134	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R135	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R136	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R201	1-216-624-11	METAL CHIP	75	0.50%	1/10W	A
R203	1-216-081-00	METAL GLAZE	22K	5%	1/6W	A
R204	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R205	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	A
R207	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R209	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R210	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R211	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R212	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R213	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R214	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R215	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R216	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R217	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R218	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R219	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R220	1-216-033-00	METAL GLAZE	220	5%	1/10W	A
R221	1-216-033-00	METAL GLAZE	220	5%	1/10W	A
R222	1-216-023-00	METAL GLAZE	82	5%	1/10W	A
R223	1-216-023-00	METAL GLAZE	82	5%	1/10W	A
R224	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R225	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	A
R226	1-216-064-00	METAL GLAZE	4.3K	5%	1/10W	A
R227	1-216-013-00	METAL GLAZE	33	5%	1/10W	A
R228	1-216-013-00	METAL GLAZE	33	5%	1/10W	A
R229	1-216-624-11	METAL CHIP	75	0.50%	1/10W	A
R230	1-216-624-11	METAL CHIP	75	0.50%	1/10W	A
R231	1-216-624-11	METAL CHIP	75	0.50%	1/10W	A
R232	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R233	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R234	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R235	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R236	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A

VARIABLE RESISTOR

RV101	1-237-517-21	RES, ADJ, CERMET 5K				C
RV201	1-237-517-21	RES, ADJ, CERMET 5K				C

SWITCH

S1	1-570-851-11	SWITCH, SLIDE				B

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BV2 BOARD

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	*4-353-708-00	HOOK, FINGER				A

CAPACITOR

C1	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C2	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C3	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	A
C4	1-163-102-00	CERAMIC CHIP	24PF	5%	50V	A
C5	1-163-348-91	CERAMIC CHIP	5PF	0.25PF	50V	C
C6	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	A
C7	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C9	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C21	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C22	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C23	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C31	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C32	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C33	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C34	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C35	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C36	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C37	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C38	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C39	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C40	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C41	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C42	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A

BV2

Ref.No	Part No.	Description				Price
C43	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C44	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C45	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C46	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C50	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C51	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C52	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C53	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C54	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C55	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C56	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C57	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C58	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C59	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C60	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C61	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C62	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C63	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C64	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C71	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C72	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C73	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C74	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C75	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C76	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C77	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C81	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C82	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C83	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C84	1-124-779-00	ELECT CHIP	10MF	20%	16V	B
C91	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C92	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C93	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C94	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C95	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C96	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C97	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C98	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C101	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C102	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C103	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C104	1-135-091-00	TANTAL CHIP	1MF	20%	16V	B
C111	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C112	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	A
C114	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V	A
C115	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	A
C201	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C202	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C203	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C204	1-135-091-00	TANTAL CHIP	1MF	20%	16V	B
C211	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C212	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	A
C214	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V	A
C215	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	A
C301	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C302	1-163-038-00	CERAMIC CHIP	0.1MF		25V	A
C303	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
C304	1-135-091-00	TANTAL CHIP	1MF	20%	16V	B
C311	1-126-204-11	ELECT CHIP	47MF	20%	16V	A
		CONNECTOR				
CN1	*1-563-018-11	CONNECTOR, F.P.C 34P				F
CN2	*1-566-044-11	PIN, CONNECTOR 5P				A
CN3	*1-566-044-11	PIN, CONNECTOR 5P				A
CN4	*1-566-043-11	PIN, CONNECTOR 4P				A

Ref.No	Part No.	Description	Price
		TRIMMER	
CV301	1-141-260-00	TRIMMER, CERAMIC	C
		DIODE	
D11	8-719-104-34	DIODE 1S2836	A
D12	8-719-104-34	DIODE 1S2836	A
D13	8-719-104-34	DIODE 1S2836	A
D14	8-719-104-34	DIODE 1S2836	A
D15	8-719-400-18	DIODE MA152WK	A
D18	8-719-104-34	DIODE 1S2836	A
D21	8-719-400-18	DIODE MA152WK	A
D22	8-719-400-18	DIODE MA152WK	A
D101	8-719-104-34	DIODE 1S2836	A
D201	8-719-104-34	DIODE 1S2836	A
D301	8-719-105-91	DIODE RD5.6M-B2	A
D302	8-719-104-34	DIODE 1S2836	A
		IC	
IC1	8-759-926-82	IC SN74HC574NS	F
IC2	8-759-926-82	IC SN74HC574NS	F
IC3	8-759-926-82	IC SN74HC574NS	F
IC4	8-759-918-33	IC CX20160	N
IC5	8-759-918-33	IC CX20160	N
IC6	8-759-918-33	IC CX20160	N
IC11	8-759-300-71	IC HD14053BFP	E
IC51	8-759-982-05	IC RC7805FA	C
IC101	8-759-420-96	IC AN8140K	T
IC102	8-759-603-24	IC CX20197	F
IC201	8-759-420-96	IC AN8140K	T
IC202	8-759-603-24	IC CX20197	F
IC301	8-759-420-96	IC AN8140K	T
		COIL	
L1	1-410-212-51	INDUCTOR CHIP 47UH	B
L2	1-410-946-31	INDUCTOR CHIP 22UH	A
L31	1-421-370-00	COIL, CHOKE	C
L51	1-421-370-00	COIL, CHOKE	C
		LOWPASS FILTER	
LPF101	1-239-075-11	FILTER, LOW PASS	R
LPF201	1-239-075-11	FILTER, LOW PASS	R
LPF301	1-239-076-11	FILTER, LOW PASS	R
		TRANSISTOR	
Q11	8-729-100-66	TRANSISTOR 2SC1623	A
Q12	8-729-216-22	TRANSISTOR 2SA1162-G	A
Q13	8-729-175-72	TRANSISTOR 2SC2757-T33	B
Q14	8-729-901-01	TRANSISTOR DTC144EK	A
Q15	8-729-901-01	TRANSISTOR DTC144EK	A
Q16	8-729-107-46	TRANSISTOR 2SC3624A-L15	B
Q17	8-729-901-01	TRANSISTOR DTC144EK	A
Q18	8-729-901-01	TRANSISTOR DTC144EK	A
Q21	8-729-901-06	TRANSISTOR DTA144EK	A
Q22	8-729-901-01	TRANSISTOR DTC144EK	A
Q23	8-729-216-22	TRANSISTOR 2SA1162-G	A
Q24	8-729-901-06	TRANSISTOR DTA144EK	A
Q101	8-729-100-66	TRANSISTOR 2SC1623	A
Q102	8-729-100-66	TRANSISTOR 2SC1623	A
Q103	8-729-216-22	TRANSISTOR 2SA1162-G	A
Q104	8-729-216-22	TRANSISTOR 2SA1162-G	A
Q105	8-729-107-46	TRANSISTOR 2SC3624A-L15	B
Q201	8-729-100-66	TRANSISTOR 2SC1623	A
Q202	8-729-100-66	TRANSISTOR 2SC1623	A
Q203	8-729-216-22	TRANSISTOR 2SA1162-G	A

Ref.No	Part No.	Description				Price
Q204	8-729-216-22	TRANSISTOR 2SA1162-G				A
Q205	8-729-107-46	TRANSISTOR 2SC3624A-L15				B
Q301	8-729-175-72	TRANSISTOR 2SC2757-T33				B
Q302	8-729-175-72	TRANSISTOR 2SC2757-T33				B
Q303	8-729-175-72	TRANSISTOR 2SC2757-T33				B
Q304	8-729-122-63	TRANSISTOR 2SA1226				B
Q305	8-729-175-72	TRANSISTOR 2SC2757-T33				B
Q306	8-729-122-63	TRANSISTOR 2SA1226				B
Q307	8-729-107-46	TRANSISTOR 2SC3624A-L15				B
		RESISTOR				
R1	1-216-097-00	METAL GLAZE	100K	5%	1/10W	A
R2	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	A
R3	1-216-097-00	METAL GLAZE	100K	5%	1/10W	A
R4	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R5	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	A
R6	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	A
R7	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	A
R8	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	A
R11	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R12	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	A
R13	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R14	1-216-089-00	METAL GLAZE	47K	5%	1/10W	A
R15	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	A
R16	1-216-097-00	METAL GLAZE	100K	5%	1/10W	A
R17	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R22	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	A
R23	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	A
R24	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	A
R25	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	A
R26	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	A
R101	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	A
R102	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	A
R103	1-216-643-11	METAL CHIP	470	0.50%	1/10W	A
R104	1-216-624-11	METAL CHIP	75	0.50%	1/10W	A
R111	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R112	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R113	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R114	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R115	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	A
R116	1-216-639-11	METAL CHIP	330	0.50%	1/10W	A
R117	1-216-639-11	METAL CHIP	330	0.50%	1/10W	A
R118	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R119	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	A
R120	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	A
R121	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	A
R122	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	A
R123	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	A
R124	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	A
R125	1-216-097-00	METAL GLAZE	100K	5%	1/10W	A
R126	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R201	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	A
R202	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	A
R203	1-216-643-11	METAL CHIP	470	0.50%	1/10W	A
R204	1-216-624-11	METAL CHIP	75	0.50%		A
R211	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R212	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R213	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R214	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R215	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	A
R216	1-216-639-11	METAL CHIP	330	0.50%	1/10W	A
R217	1-216-639-11	METAL CHIP	330	0.50%	1/10W	A
R218	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R219	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	A
R220	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	A
R221	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	A
R222	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	A
R223	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	A
R224	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	A
R225	1-216-097-00	METAL GLAZE	100K	5%	1/10W	A
R226	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R301	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	A
R302	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	A
R303	1-216-643-11	METAL CHIP	470	0.50%	1/10W	A
R304	1-216-624-11	METAL CHIP	75	0.50%	1/10W	A
R311	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R312	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R313	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R314	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R315	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	A
R316	1-216-639-11	METAL CHIP	330	0.50%	1/10W	A
R317	1-216-639-11	METAL CHIP	330	0.50%	1/10W	A
R318	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R319	1-216-073-00	METAL GLAZE	10K	5%	1/10W	A
R320	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	A
R321	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	A
R322	1-216-049-00	METAL GLAZE	1K	5%	1/10W	A
R323	1-216-075-00	METAL GLAZE	12K	5%	1/10W	A
R324	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	A
R325	1-216-019-00	METAL GLAZE	56	5%	1/10W	A
R326	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	A
R327	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	A
R328	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
R329	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	A
R330	1-216-097-00	METAL GLAZE	100K	5%	1/10W	A
R331	1-216-025-00	METAL GLAZE	100	5%	1/10W	A
		VARIABLE RESISTOR				
RV101	1-237-517-21	RES, ADJ, CERMET 5K				C
RV102	1-237-515-21	RES, ADJ, CERMET 1K				C
RV201	1-237-517-21	RES, ADJ, CERMET 5K				C
RV202	1-237-515-21	RES, ADJ, CERMET 1K				C
RV301	1-237-517-21	RES, ADJ, CERMET 5K				C
		SWITCH				
S1	1-570-851-11	SWITCH, SLIDE				B
S2	1-570-851-11	SWITCH, SLIDE				B

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	*1-638-533-11	GD BOARD	(BKM-2085-14 ONLY)
		********	
		CONNECTOR	
GD1	*1-566-044-11	PIN, CONNECTOR 5P	A
GD2	*1-566-044-11	PIN, CONNECTOR 5P	A
GD3	*1-566-043-11	PIN, CONNECTOR 4P	A

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	*1-637-136-11	V2 BOARD	K
		*******	
		CONNECTOR	
CN2	1-563-265-11	CONNECTOR, MULTIPLE 10P	K
		DIODE	
D1	8-719-110-36	DIODE RD13ES-B2	A
D2	8-719-110-36	DIODE RD13ES-B2	A

V2

Ref.No	Part No.	Description				Price
		RESISTOR				
R1	1-249-405-11	CARBON	100	5%	1/4W	A
R2	1-249-405-11	CARBON	100	5%	1/4W	A
R3	1-249-405-11	CARBON	100	5%	1/4W	A
R4	1-249-405-11	CARBON	100	5%	1/4W	A
R5	1-249-405-11	CARBON	100	5%	1/4W	A
R6	1-249-405-11	CARBON	100	5%	1/4W	A
R7	1-249-405-11	CARBON	100	5%	1/4W	A
R8	1-249-405-11	CARBON	100	5%	1/4W	A
R9	1-249-405-11	CARBON	100	5%	1/4W	A

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ACCESSORIES AND PACKING MATERIALS
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Ref.No	Part No.	Description	Price
	1-500-249-11	BEAD, FERRITE (CASE) (BKM-2085-14 ONLY)	
	1-500-051-11	BEAD, FERRITE (WITH CASE) (BKM-2085-20 ONLY)	
	1-941-802-01	CONNECTOR ASSY, MICRO 5P	
	1-941-803-03	CONNECTOR ASSY, MICRO 4P (BKM-2085-14 ONLY)	
	*2-113-037-01	CUSHION (A)	
	*2-113-038-01	CUSHION (B)	
	2-136-932-01	LABEL, 4 2 2	G
	*4-031-386-01	INDIVIDUAL CARTON (BKM-2085-20 ONLY)	
	4-031-396-01	MANUAL, OPERATION & MAINTENANCE	
	4-031-396-11	MANUAL, OPERATION & MAINTENANCE (SERIAL NO. 2002776 & HIGHER BKM-2085-14) (SERIAL NO. 2002926 & HIGHER BKM-2085-20)	
	* 4-031-409-01	INDIVIDUAL CARTON (BKM-2085-14 ONLY)	

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MISCELLANEOUS
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Ref. No	Part No.	Description	Price
	1-413-639-11	REGULATOR, SWITHING (BKM-2085-14 ONLY)	
	1-413-615-11	REGULATOR, SWITHING (MRE-05003-2) (BKM-2085-20 ONLY)	VC
	1-500-279-11	FILTER, CLAMP (FERRITE CORE) (BKM-2085-20 ONLY)	
	* 1-590-367-11	CABLE, MINIATURE PIN	G
	* 1-590-367-21	CABLE, MINIATURE PIN	G
	* 1-590-367-31	CABLE, MINIATURE PIN	G
	* 1-590-367-41	CABLE, MINIATURE PIN	G
	1-569-711-11	CONNECTOR, BNC (50 ORM)	G